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ABSTRACT

An analysis conducted by the state of Washington showed that the new jobs of the future will require workers with skills acquired in technical areas, but not college degrees. The analysis suggests that the present educational system is not producing an adequate supply of such workers and that more nontraditional workers will have to be recruited in order to meet the demand. In addition, the educational system must be reformed to provide more customer-focused employment and training services with more systemwide accountability. Three goals were set for work force training and education: (1) ensuring that the people of Washington will succeed in an economy that requires higher levels of skill and knowledge; (2) ensuring that all Washington residents have opportunities to learn and to advance in their chosen field of work; and (3) changing the ways of learning and teaching, so that all training and education programs are customer-driven, competency-based, and focused on achieving results. Eleven recommendations for action were made. (KC)

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High Skills, High Wages

Washington's Comprehensive Plan for Workforce Training and Education

Workforce Training and Education Coordinating Board

The Vision

To develop a globally competitive workforce supported by an accessible, flexible, competency-based, and technologically current training and education system.

Mission Statement

The mission of the Workforce Training and Education Coordinating Board is to actualize Washington's Workforce Vision by:

- Establishing a new workforce partnership to include active participation by leaders from labor, business, education and government;
- Empowering change to all levels of the training and education system as needed by all participants, including students, workers, employers, educators, trainers and political leaders;
- Increasing the number of participants from traditionally underserved populations participating in training programs that are responsive to ethnic and cultural diversity;
- Increasing self-sufficiency of families by advocating for support services so that individuals access training opportunities and prepare for jobs that bring a living wage;
- Improving coordination among all programs and providers, public and private, within the state's workforce training and education system;
- Promoting training and education that is competency-based, with equal emphasis on academic and occupational skills acquisition; and
- Generating new and leveraged resources for an integrated, cost-effective, statewide training and education system.

Board Members

Betty Jane Narver
Chairperson

Gilberto Alaniz
Representing Targeted Populations

Judith Billings
State Superintendent of Public Instruction

Dale A. Boose
Representing Business

Al Brisbois
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High Skills, High Wages

Washington's Comprehensive Plan for Workforce Training and Education

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State of Washington
Mike Lowry, Governor

1994

STATE OF WASHINGTON

WORKFORCE TRAINING AND EDUCATION COORDINATING BOARD

September 1994

Governor Lowry and Members of the Legislature:

We are pleased to submit *High Skills, High Wages*, our state's comprehensive plan for workforce training and education.

It is the product of a thorough and collaborative process that drew ideas from students, workers, employers, unions, training and education providers, community organizations, and government agencies.

The goals of the plan are simple and straightforward:

- Ensuring that the people of Washington will succeed in an economy that requires higher levels of skill and knowledge,
- Ensuring that all Washington residents have opportunities to learn and to advance in their chosen field of work throughout their lifetimes, and
- Changing the way we learn and teach, so that all training and education programs are customer-driven, competency-based, and focused on achieving results.

As we embark on the important work of bringing the recommendations of this plan to life, we are mindful of the high stakes involved in meeting the challenge of change. We know how much a family-wage job means to every adult worker. We understand the importance of well-educated employees to Washington businesses. And perhaps most compelling, we understand that failure to achieve the goals of this plan will cripple the economic prospects of the people of our state.

Implementing this plan will require political commitment and both public and private investment. Success will depend on an unprecedented degree of collaboration among public agencies and institutions, private providers of training and education, commu-

nity organizations, employers, students, unions, and workers. It will also require sustained public dialogue that engages citizens in the process of change.

We appreciate your confidence in our ability to develop and implement this plan, and we look forward to working with you on this ambitious agenda for change.

Sincerely,

Betty Jane Narver
Chairperson

Karen Carter
Representing Labor

Dale A. Boose
Representing Business

Gilberto Alaniz
Representing Targeted Populations

Roberta J. Greene
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INTRODUCTION:

How Will Washington Work?

In the coming century, the driving force for Washington's economy will be the human mind. If we succeed in the global marketplace of the future, it will be because we invest wisely now in the human capital necessary to produce products and services that are high quality, to innovate, and to adapt to changing needs and technologies.

Our challenge is to close the dangerous gap between today's educational levels and the more demanding skill requirements of the family-wage jobs of tomorrow. And we must close that gap both for young people who will enter the workforce in years to come and for adults who are already working.

This challenge has a special urgency for those who have been pushed to the margins of the economic mainstream. New entrants to the workforce will increasingly be women, people of color, and non-English speakers — people whose talents have been underutilized in the past, but whose full participation will be essential to our future economic success.

— Continued —

Creating a highly skilled workforce requires sustained public investment. That investment will only be made when people understand the need for change and the devastating consequences of failure. And it can only be sustained when all citizens — and especially employers — can see that the taxes they pay for training and education are producing successful citizens and a world-class workforce.

The Legislature has charged the Workforce Training and Education Coordinating Board (WTECB) with preparing a comprehensive plan to ensure that Washington develops the well-educated, multi-skilled and flexible workforce we need to compete in the global economy.

This comprehensive plan describes the economic and demographic conditions that underlie the need for change, and lays out the actions that state-level policy leaders must take to help achieve our vision of a creative, secure and globally competitive workforce. Clearly, government alone cannot create the system we need, nor will action at the state level bring about all the necessary improvements. Businesses, labor unions, community organizations, workers, students and educators must all be partners in the effort.

High Skills, High Wages

The Impetus for Change

A Dynamic Economy that Demands High Skills

For years, Washington's resource-based economy was able to provide high-paying jobs to workers with only a high school education. Our forests and factories provided a living wage to loggers and production workers. But traditional sources of high-wage, low-skilled work now have limited growth prospects.

The future is not bright for those with no more than a high school education. Although Washington's economy is expected to create 152,000 jobs for low-skilled workers between now and 2010, these won't be the kinds of jobs that helped loggers and production workers prosper. They will be low-wage jobs serving food, cleaning offices and unloading trucks.

The greatest number of new job opportunities will be in occupations that require some post-secondary education, but *not a four-year degree from a college or university*. A full 400,000 new jobs will be created for technicians, paralegals, health care workers, salespeople and other occupations that require some formal training. By comparison, there will be only 173,000 new jobs for teachers, engineers, lawyers and other professionals who need a four-year degree.

— Continued —

Employers Find the Skills of Current Workers Lacking

Employers believe that skill shortages are hurting the economy by limiting business expansion, lowering productivity and reducing product quality.

Employers' experiences suggest that our workforce training and education system may not produce enough qualified workers to fill these jobs.

A 1990 study by the state's Office of Financial Management found that 60 percent of employers have difficulty finding workers with job-related skills. One-third of employers expressed dissatisfaction with their current workers' basic skills, such as reading, writing and quantitative reasoning. Indeed, employers believe that skill shortages are hurting the economy by limiting business expansion, lowering productivity and reducing product quality.

Skill shortages are contributing to another problem: a widening gap between well-educated citizens with high incomes and low-skilled citizens struggling to maintain a modest standard of living. From 1967 to 1987, the highest-earning 30 percent of American families increased their share of national income from 54 percent to 58 percent, while the share earned by the bottom 70 percent dropped to 42 percent from 46 percent.

A Slow or Stagnating Rate of Productivity Increase

One cause of stagnating incomes is stagnating productivity growth. Productivity grew by an average of 2 percent per year from 1963 to 1973, ushering in steady improvement in living standards. But it slowed to 1.3 percent from 1980 to 1984, and dropped below 1 percent by the end of the decade.

To put productivity back on the road of steady increases, we need to increase use of technology and promote the spread of high performance work organizations. High performance work organizations require high-skilled workers who can participate in decisions, operate computerized machines, understand statistical process control and contribute to cross-functional teams.

If employers can't find trained workers in Washington, they will look to other states or nations, or they will design new jobs so that high skills are less important and high wages are unnecessary. If we can't equip our workforce with the skills to succeed in high-wage jobs, our society will become increasingly polarized into skilled "haves" and unskilled "have-nots."

The Workforce

Will We Have the Skills We Need?

Two major population trends challenge our state's ability to provide skilled workers. Growth in the workforce is slowing, and an increasing percentage of new entrants to the workforce has less education and fewer skills than did new entrants in the past. Forty percent of the net additions to the workforce will be people of color, and more than half will be women.

If the supply of skilled workers is limited, Washington's future economic growth

could be constrained. Shortages could develop, particularly in occupations which require technical training beyond the high school level.

To ensure an adequate supply of skilled workers, we will need to draw on those who in the past have been under-represented in both technical training programs and the workforce at large. The combination of slower growth in the number of new workers and accelerating growth in the number of women and minorities in the workforce bring together the moral imperative for equal opportunity and the economic imperative for better educated workers.

In the decades ahead, we will not have any workers to waste. We will need to ensure that every child learns in school, that every student graduates from high school with strong basic skills, and that every graduate of high school and post-secondary education has the career counseling, training, and on-the-job experience he or she needs to make a successful transition from school to work. We will need to reach out to the thousands of women and people of color, as well as to people who are disabled or economically disadvantaged, and who are now underemployed or unemployed because they lack the education or job skills necessary to succeed in the workplace.

Our Workforce Training and Education System

Can We Rise to the Challenge?

Washington's workforce training and education system is diverse and complex. It encompasses more than 60 state and federal programs, hundreds of academic and technical institutions, and thousands of students and workers. Employers and private training organizations are partners in this enterprise in addition to being providers of employment and training services.

Our global competition-driven economy and the changing composition of our workforce are presenting this system with unprecedented new challenges. We need to create a seamless system of learning opportunities that starts with pre-school education and continues through the entire lifespan of every citizen and worker.

Education Reform

Our schools must use competency as the standard of student achievement. Students should progress *when they have mastered the material at hand*, rather than when an arbitrary-time limit has been reached. We need to create a system in which every student has access to a variety of rigorous educational pathways that help students make the transition from school to productive employment and/or further training and education. And schools' success should be measured by what happens to *all*

We need to create a system in which every student has access to a variety of rigorous educational pathways that help students make the transition from school to productive employment and/or further training and education.

What an Ideal Workforce Training and Education System Would Look Like

The ideal workforce training and education system would:

- Be customer driven — organized around the needs of students, workers and employers;
- Be easy to find and enter, and be designed so that people can move easily among and between programs, and between programs and the workplace;
- Meet the needs of all learners, including those who have been underserved in the past because of racial, ethnic or cultural differences; gender; disability or learning style;
- Provide support services such as career counseling, child care and financial aid to those who need them;
- Be competency-based, so that all students are able to master the skills and knowledge they need in as much or as little time as they need to do so;
- Be staffed by people who are prepared to teach a diverse student body, and who have relationships with employers that help them stay up to date on changes in their fields;
- Be coordinated with private sector training programs, with social and other services, and with economic development strategies;
- Be based on full partnerships between business, labor, and training and education representatives;
- Promote the dignity of work and the value of workforce training and education;
- Rely on the best labor market information, so that people acquire skills that local industries need;
- Provide students and workers with a foundation of basic skills that equip them to be lifelong learners; and
- Be accountable for results, and committed to using outcome measures to continuously improve program quality.

their graduates, not just by graduates' success in entering college, but in their pursuit of good jobs and appropriate post-secondary education or technical training as well.

With the passage of education reform legislation, we have begun adopting competency-based measures as the yardsticks of student achievement. The Legislature has incorporated school-to-work transition in education reform and has begun to bolster high school vocational and school-to-work transition programs with greater funding.

A Customer-Focused Training and Employment System

Thirteen state agencies administer at least 64 different and frequently overlapping programs for training and related services. The current complexity and insufficient coordination among and between these public programs are inhibiting effectiveness. Workforce training and education programs must become less fragmented and more focused on customers — students and other program participants, workers, and employers.

The customer now sees a bewildering array of piecemeal programs. Taken together with the diversity of public and private institutions that provide services, students face a maze of different eligibility requirements, forms to fill out and hoops to jump through. These obstacles discourage people from obtaining the services they need.

We are moving to more customer-focused employment and training services. For example, House Bill 1988 has provided funding for the retraining of thousands of dislocated workers at community and technical colleges, which are working with Private Industry Councils and Job Service Centers to integrate employment and support services. And, in anticipation of federal legislation creating a customer-centered "re-employment" system, the Employment Security Department has begun planning an "integrated service delivery system" for the state, and has earmarked $5 million of current funds to support pilot projects.

System-Wide Accountability Needed

Along with better coordination must come increased accountability for results. Washington State currently has separate accountability activities for each of our workforce training and education programs, but we do not have an accountability *system*. There are no agreed-upon measurable goals for the workforce training and education system as a whole, and no standards for collecting data in a consistent fashion from agency to agency. Without such a system it is difficult to assess our progress or effectiveness. In reaching our goals, however, efforts to improve accountability are underway in several state agencies, and accountability is a major focus of this plan.

Public/Private Partnerships

Washington's workforce training and education system is already very much a partnership between the public and private sectors. Private employers, along with the workers they hire, are the prime beneficiaries of the system. Private sector representatives advise the system's public institutions as members of formal advisory boards. The economic imperative for a trained and productive workforce, however, demands we expand and deepen these relationships to form even closer links between the public and private sectors.

Workforce training and education programs must become less fragmented and more focused on customers — students and other program participants, workers, and employers.

Funding

Preliminary estimates indicate that Initiative 601 will limit state general fund expenditures to a level that may be insufficient to meet the cost of ongoing services and cost-of-living adjustments. As a result, there will be little opportunity to use the general fund to implement new policies or programs, or to expand existing programs. However, other areas of state spending — such as some trust funds — apparently are not covered by the Initiative. Also, the Initiative does not limit revenue, only spending. Because of these features of the Initiative, advocates of additional investment may turn to non-general fund sources of money or to tax incentives that could affect private sector behavior without state expenditures.

Three Goals for Workforce Training and Education

This plan addresses three overarching goals:

- Ensuring that the people of Washington will succeed in an economy that requires higher levels of skill and knowledge,
- Ensuring that all Washington residents have opportunities to learn and to advance in their chosen field of work throughout their lifetimes, and
- Changing the way we learn and teach, so that all training and education programs are customer-driven, competency-based and focused on achieving results.

The Most Urgently Needed Actions

Many changes in our attitudes and actions will be necessary to achieve these goals, and these changes are outlined and explained in this plan. Indeed, the goals and recommendations in this plan should guide the agencies of the workforce training and education system in budget and policy planning.

The most urgently needed actions are:

1. ***Confirm a coherent vision of a system of lifelong learning:***

   Within one year, the Governor should convene a summit of all statewide policy makers involved in education and job training for the purpose of confirming a shared vision for all education, from pre-school through adulthood.

2. ***Develop a competency-based workforce training and education system:***

   Within five years, workforce training and education agencies will develop student performance standards and assessments that are competency-based and transferable across all training and education programs. Organizations responsible for professional development will make their programs competency-based.

3. ***Serve the needs of an increasingly diverse population:***

   Within two years, workforce training and education programs will develop goals and strategies for increasing the success rates of people of color, women and people with disabilities.

4. ***Make workforce training and education accountable for continuous quality improvement in meeting customer needs:***

   Within one year, WTECB, in collaboration with other agencies and partners of the workforce training and education

system, will establish measurable goals, or benchmarks, for workforce training and education. Within two years, all workforce training and education programs will measure results in order to track progress toward these goals and to continuously improve programs and policies.

5. ***Increase public awareness about the importance of workforce training and education:***

   For the next three years, WTECB, together with its partners in both the public and private sectors, will lead a statewide effort to engage the public in a discussion of the need for higher levels of skill and knowledge and the importance of personal and corporate responsibility for lifelong learning.

6. ***Build partnerships between the private sector and workforce training and education, including work-based learning and skill standards:***

   For the foreseeable future, WTECB, the workforce training and education agencies, and statewide associations of labor and business will collaborate in building the capacity of the private sector to participate in training and education policy and program development and implementation. The aims of such partnerships will include the integration of work-based learning with school-based learning, and the development of up-to-date occupational skill standards and assessments.

7. ***Integrate employment- and training-related services so that they are easier to find and enter:***

   The Governor should continue to take leadership to establish "one-stop" or integrated service delivery systems for employment- and training-related services.

8. ***Consolidate programs where coordination and efficiencies can result:***

   By January 1, 1995, WTECB will, as required by House Bill 1988, "conduct a study in consultation with the Higher Education Coordinating Board on the feasibility of: (a) redirecting all state and federal job training and retraining funds distributed in the state into a separate job training trust fund; and (b) distributing the funds according to uniform criteria."

9. ***Coordinate workforce training and education with state and local economic development strategies:***

   For the foreseeable future, the Department of Community, Trade and Economic Development and the workforce training and education system will promote the development of high performance work organizations by developing industry consortia in high value-added sectors of the economy, and providing them with assistance in employee training, human resource organization, ISO 9000 certification, export assistance and other services.

"If we, as a nation, cannot summon the will to give our children the knowledge and skills and values they need to take their place in the world, then we will be guilty of the worst kind of moral failure."

Frank Shrontz, chairman and CEO of the Boeing Company, April 13, 1994, at a national symposium on implementing the Certificate of Mastery concept.

10. *Make the last years of high school part of a school-to-work transition system:*

    Within five years, schools will provide educational "pathways" to students who have completed a Certificate of Mastery. These pathways will be organized around career majors that integrate academic and vocational learning, and school-based and work-based education. Essential learning requirements will be developed for the period between completion of the Certificate of Mastery and high school graduation.

11. *Improve the basic skills of today's workforce:*

    Within the next year, the Adult Education Advisory Council and the State Board for Community and Technical Colleges should develop guidelines and policies to increase the success rate and quality of adult basic skills education programs, and integrate basic skills instruction with occupational training.

TOMORROW'S ECONOMY:

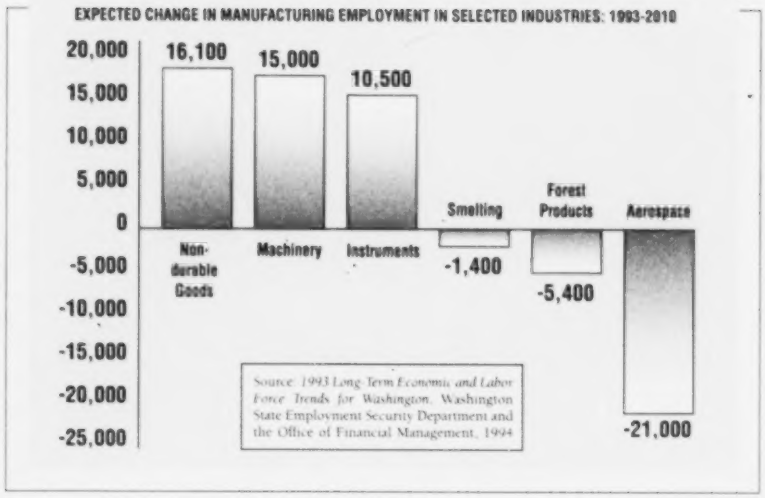
Only the Skilled Will Be Well-Paid

Washington is moving away from a resource-based economy in which people with little formal education could find good-paying jobs. Our new economy is knowledge-based, and the fastest growing jobs in the future will be technical, professional and managerial. The majority of jobs that will be created in Washington between now and 2010 will require some post-secondary education, but not necessarily a four-year degree.

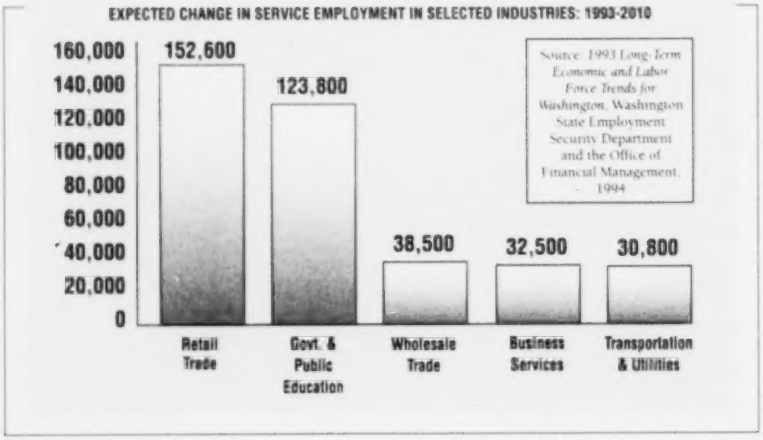
The skill level of many potential new jobs in Washington's changing economy remains to be seen. Employers increasingly have a choice between creating low-wage jobs that have been deliberately designed to be low skilled, and designing high-wage, high-skilled jobs for the high performance work organizations demanded by the new economy.

De-skilled jobs can be located anywhere there is a low-skilled, low-paid labor force. High performance work organizations can flourish only where there are high-skilled workers. If Washington wants its citizens to enjoy high-paying jobs, it must both prepare people to work in high performance organizations and encourage Washington employers to become such organizations.

— Continued —



Manufacturing employment in Washington will grow in some industries and decline in others.



Employment growth in Washington's service industries will far exceed growth in manufacturing employment.

Opportunities for the Low-Skilled Are Shrinking

For years, Washington's resource-based economy was able to provide high-paying jobs to workers with only a high school education. Our forests and factories provided a living wage to loggers and production workers. No longer. Traditional sources of high-wage, low-skilled work have limited growth prospects.

The lumber and wood products industry, which once employed 61,000 people in Washington, has shrunk to 37,000 and will continue to decline as supply limitations restrict the available harvest. The aluminum smelting industry, another source of high-wage jobs requiring little formal education, employed 17,400 people as late as 1979. By 1993, the number had dropped to 11,600.[1] The Bonneville Power Administration estimates that one-half of aluminum producers in the Northwest are at risk of going out of business by 2010.[2]

Agriculture is a major exception to the trend of declining employment in resource-based industries. Employment in Washington's agricultural sector is expected to grow by 5,500 from 1993 to 1998.[3] However, a large number of these jobs are low-wage, seasonal positions.

Even a healthy aerospace industry, the Northwest's largest source of both skilled and semi-skilled manufacturing jobs, won't offset the decline in low-skill, high-wage jobs. Aerospace employment has peaked. Although the airlines are recovering and new jets are being ordered, Boeing is

committed to building those jets with fewer people. By 2010, Washington's aerospace industry will have approximately 21,000 fewer jobs than it did in 1992.[4]

Although some of the decline in low-skilled jobs is due to resource limitations, most can be attributed to irreversible trends toward replacing workers with machines, re-engineering how work is done to take advantage of computers, and to an increasingly international market that can tap lower-cost labor in other countries.

In a Global Economy, Jobs Can Be Located Almost Anywhere

Washington is already aware of the advantages offered by a global economy. We sell our apples to Russia, our logs to Japan, our airplanes and software to the world. But as opportunities to sell to other countries have increased, so have other countries' opportunities to make the very things we sell. And it's not simply a case of using low-wage unskilled labor to mass produce inexpensive standard products. Foreign countries are increasingly able to offer highly skilled alternatives to using American workers.

Boeing will build tail sections for the 737 in China. French software engineers adapt Microsoft products for the French market. And Vancouver production workers who make Hewlett-Packard's hugely successful inkjet printers compete with a sister plant in Singapore.

With advances in telecommunications, even complex service work can now be performed overseas. In Ireland's County Cork, 150 Metropolitan Life workers analyze medical insurance claims from American consumers to determine if they are eligible for reimbursement.[5] This is not grunt work. It demands considerable knowledge of medicine, the American medical system and the insurance business. Other American employers are using Irish workers to monitor the movement of money in and out of employee pension accounts, translate software, and even provide technical advice on software to American callers.

Three things attract American employers to Ireland: a 30-percent advantage in operating costs, a strong work ethic, and a high level of technical skill attributable to Ireland's schools.

Where the Jobs Will Be in 2010

The future is not bright for those with no more than a high school education. Although Washington's economy is expected to create 152,000 jobs for low-skilled workers between now and 2010, these won't be the kinds of jobs that helped loggers and production workers prosper. They will be low-wage jobs serving food, cleaning offices and unloading trucks.[6]

The greatest number of new job opportunities will be in occupations that require some post-secondary education, but *not a four-year degree from a college or university*. A full 400,000 new jobs will be created for technicians, paralegals, health care workers, salespeople and other occupations that require some formal training. By compari-

"Most members of the National Association of Manufacturers... feel that school systems are providing neither adequate basic skills nor an adequate understanding of business and the necessary work ethic. They reject five of every six job applicants."

Phyllis Eisen, senior policy director, National Association of Manufacturers, as reported in the *Vocational Education Journal*, October 1993.[22]

TRAINING REQUIRED FOR THE NEW JOBS CREATED BETWEEN 1994-2010
No Formal Training Beyond High School 22%
4-Year Degree 25%
Some Post-Secondary Training 53%
Source: Investment in Human Capital Study, Washington State Office of Financial Management

Most of the new jobs created between now and 2010 will require training beyond high school, but not a 4-year degree.

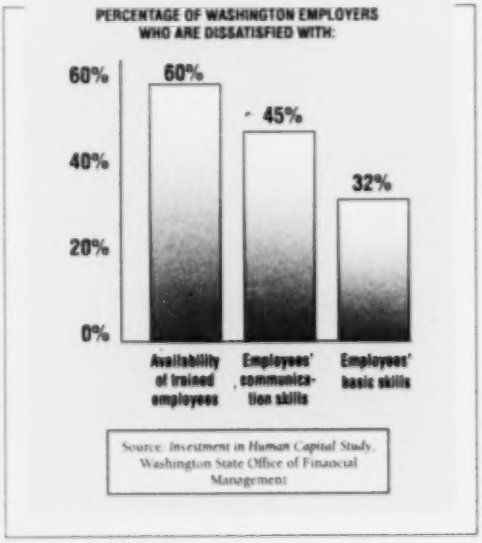
son, there will be only 173,000 new jobs for teachers, engineers, lawyers and other professionals who need a four-year degree.[7]

The table on the next page shows 18 occupational areas that are each expected to generate at least 20,000 new jobs in Washington in the next 16 years. Eleven of the 18 areas — representing 55 percent of the forecasted jobs — require some post-secondary training, but not a four-year degree. Four areas call mostly for people with college degrees; these categories account for about 24 percent of the predicted jobs. Only three occupational areas, representing 21 percent of the jobs, require no formal education beyond high school.

Employers Find the Skills of Current Workers Lacking

Will our educational system produce enough qualified workers to fill these jobs? Employers' experience with their existing workforce, from which 85 percent of tomorrow's workers will come, suggests that skills may fall short.

A 1990 study conducted among 4,200 state employers by the state's Office of Financial Management found that 60 percent have difficulty finding workers with job-related skills. One-third expressed dissatisfaction with their current workers' basic skills, such as reading, writing and quantitative reasoning. One-half said their workers needed improvement in communication skills, human relations and work habits.[8]



Employers believe that current employees need improved skills.

Occupations Expected to Grow by 20,000* or More Jobs in Washington: 1990 - 2010

Occupational Areas Requiring Some Post-Secondary Training, But Not a Four-Year Degree

Sales occupations	90,000
(manufacturers' representatives, insurance agents, retail clerks)	
General office occupations	56,000
(receptionists, information clerks, auditing clerks)	
Transport/material moving occupations	38,000
(truck drivers, fork lift operators, bus drivers)	
Mechanics, installers, repairers	34,000
(auto mechanics, cable TV installers, appliance mechanics)	
Construction trades	33,000
(carpenters, pipefitters, bricklayers)	
Health service and related occupations	30,000
(dental assistants, nursing aides, home health aides)	
Management support occupations	25,000
(underwriters, loan officers, purchasing agents)	
Health assessment and treating occupations	24,000
(respiratory therapists, licensed practical nurses, emergency medical technicians)	
Secretaries and typists	24,000
Industry-specific support occupations	24,000
(engineering technicians, tellers, insurance examining clerks)	
Protective service occupations	22,000
(police, fire fighters)	
SUBTOTAL—Jobs needing some post-secondary training	*400,000*

Occupational Areas Requiring Mostly a Four-Year Degree

Managers and administrators	74,000
(accountants, buyers, general managers)	
Elementary and secondary school teachers	38,000
Health diagnosing occupations	37,000
(physicians, registered graduate nurses, registered occupational therapists)	
Engineers	24,000
(electrical, mechanical, civil)	
SUBTOTAL—Jobs needing a four-year degree	*173,000*

Occupational Areas Requiring No Formal Training

Food and beverage services	104,000
(waiters, counter clerks, kitchen workers)	
Cleaning and building services	26,000
(housekeepers, janitors, groundskeepers)	
Receiving, scheduling and dispatching	24,000
(warehouse workers, taxi dispatchers)	
SUBTOTAL—Jobs requiring no training	*152,000*
TOTAL	*725,000*

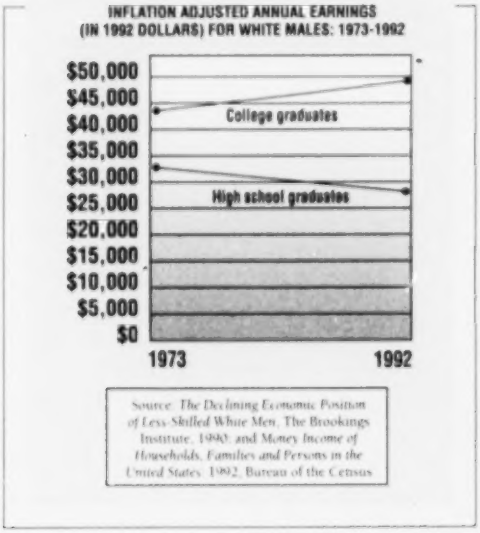
* *Agricultural occupations are not shown here because they will not grow by 20,000 or more jobs.*

Source: Investment in Human Capital Study, Office of Financial Management, 1990.

Worse, the study found that employers believe these skill shortages are hurting the economy by limiting business expansion, lowering productivity, and reducing product quality.

An Increasing Gap Between the Haves and Have-Nots

Skill shortages are also contributing to another problem: a widening gap between well-educated citizens with high incomes and low-skilled citizens who are struggling to maintain a modest standard of living. Across America, the decline in high-paying factory jobs, and more recently, of white-collar managerial positions, has stalled improvements in our standard of living. For many Americans, living standards have deteriorated.



Real wages for the less skilled have fallen in the last 20 years, while wages of the skilled have risen.

Statewide, real wages declined by 9.3 percent from 1972-92.[9] The effect of this drop was moderated somewhat by increases in family income brought on by the entry of more women into the workforce. And the economy as a whole grew as the maturing of the baby boom generation and the arrival of immigrants increased the number of available workers. But the fruits of that growth have not been equally distributed.

Nationally, among white males age 25-64 with only a high school education, real wages dropped 15 percent from 1973 to 1992. At the same time, white male workers with college degrees pocketed increases of 13 percent.[10] From 1967 to 1987, the highest-earning 30 percent of American families increased their share of national income from 54 percent to 58 percent. At the same time, the share earned by the bottom 70 percent dropped to 42 percent from 46 percent.[11]

A Slow or Stagnating Rate of Productivity Increase

One cause of stagnating incomes is stagnating productivity growth. Only by producing more high-quality goods and services with lower production costs are we able to increase our standard of living. Productivity grew by an average of 2 percent per year from 1963 to 1973, ushering in steady improvement in living standards. But it slowed to 1.5 percent from 1980 to 1984, and dropped below 1 percent by the end of the decade.[12] And though productivity

began to increase again in 1993, the rate of growth is believed to be modest.

What would it take to put productivity back on the road of steady increases? Increased use of technology and high performance work organizations are two of the ingredients. But to achieve the full benefit of either, we need a skilled and educated workforce.

Technology Demands Higher Skills

Few occupations are escaping the technological changes forced by computers. Employees must not only become familiar with new, highly sophisticated machines, they must learn and relearn whole new organizational processes associated with those machines. According to Kiichi Mochizuki, a former Japanese steel executive who heads the Pacific Institute research group:

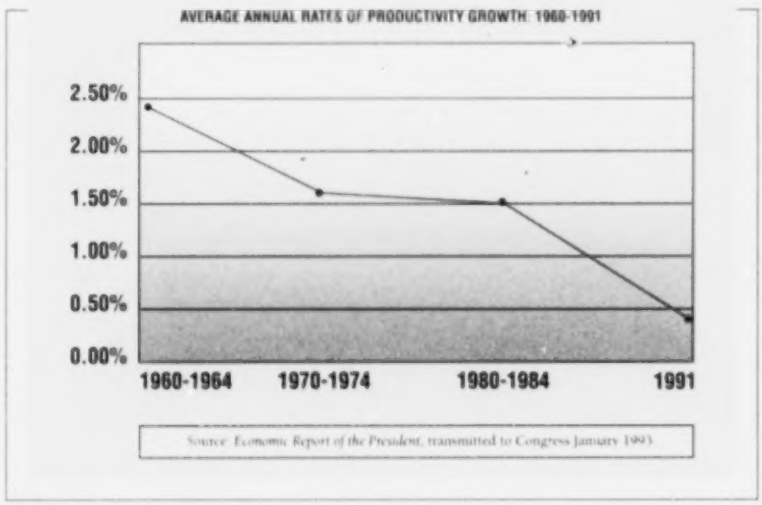
"These days, with computerized factories and digitally controlled machines, mathematics are very important for factory operations. When you talk about skill—the word 'skill' is wrong. It implies manual dexterity to carve wood or hit something with a hammer. Now skill is mental rather than manual."[13]

Even the auto industry, which perfected mass production using semi-skilled workers, is being transformed. Oldsmobile, Ford and Chrysler are slashing the number of supervisors in their factories and giving workers greater responsibility for ensuring quality, redesigning manufacturing processes, and improving the products themselves. Ninety-seven percent of employees hired by Ford since 1991 are high school graduates, compared to an average of 81 percent for Ford's hourly employees in general.[14] And when Chrysler replaced its antiquated Jefferson Avenue plant in Detroit with a new plant, it spent a million hours training the existing workforce to operate the new plant's highly automated machinery using self-directed work teams.

Training costs for the Jefferson conversion were high in part because many of the workers hadn't completed high school. Most corporations can't afford what Chrysler spent to provide basic education to employees. Even Chrysler, currently America's most profitable automaker, found the cost burdensome. "If that's the way I'm going to handle my training, I'm going to go out of business," says Dennis Pawley, who heads Chrysler's manufacturing operations.[15]

"To create the productivity that can justify high wages, American K-12 education will have to improve...The real problem is not deterioration... the rest of the world is simply reaching levels of performance far above those ever reached in the United States."

Lester Thurow, economist, writing in his book *Head to Head: The Coming Economic Battle Among Japan, Europe and America*.[23]



Growth in productivity is stagnating.

Reinventing Government: Using High Performance Work Teams

The renewal of driver's licenses — one of Washingtonian's least-enjoyed rituals of regulation — is being improved by teams of motivated state employees. Since 1990, the Department of Licensing (DOL), has been using the tools of quality, problem solving, teamwork and statistical process control to bring better service to customers.

DOL maintains the auto and driver's license records for more than three million drivers and performs licensing functions for the state's businesses and professions. Its adoption of team-based problem solving began four years ago and has been applied to achieve a variety of internal process improvements.

Once a process is targeted for improvement, a 6-8 person team tackles the issue. The team includes employee "customers" of the process, a facilitator, a team leader, and a "ringer" who is not involved in the process. When participating in team meetings, members must leave their rank at the door. They work on the principle that those closest to the process have the knowledge to improve the process, and they follow a systematic approach of "Plan-Do-Check-Act" inspired by total quality pioneer W. Edwards Deming.

As a result of the teams' efforts, driver licensing offices have simplified their work processes and improved their turnaround times. Search and filing time for certain documents has been reduced by 50 percent. Response times for processing license applications to sell mutual funds (another DOL responsibility) have been reduced from 14 days to 3 days. At the same time, surveys reveal an increase in worker satisfaction.[20]

The High-Skill / Low-Skill Decision

Chrysler's approach to automation involved redesigning the work to employ skilled, self-directed teams. But this isn't employers' only alternative in automating the workplace. They can "de-skill" their processes —redesigning the work so that it can be performed by a machine tended by a low-paid, low-skilled employee. Or they can replace skilled employees with robots.

General Motors chose the latter path in "reindustrializing" its plants during the Eighties. The company spent $77 billion on new assembly lines filled with sophisticated robots that could build a single model faster and with fewer workers than traditional assembly methods.[16]

This approach can work well in markets where a standard, mass-produced product will satisfy consumers. But companies that serve markets where consumer tastes change often are increasingly choosing to redesign work to employ high-skilled labor using flexible, computer-assisted production processes. In these markets, the most successful producers are flexible and quick to respond to market developments with small batches of customized goods that are both high-quality and competitively priced.

Toyota has chosen the flexible approach. Using teams of motivated workers instead of hundreds of robots, it can build as many as 38 different models on the same assembly line, quickly shifting production from slow-selling to hot-selling models. In contrast, GM's Fairfax, Kansas plant, rebuilt in 1987 with the latest in robotics, at times

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has had to run at 40 percent of capacity because customers weren't buying the Pontiac Grand Prix and the assembly line wasn't flexible enough to produce better-selling models.[17]

Washington's microbreweries have discovered the advantages of flexible, small-batch production. One such brewer, Redmond's Brandevor Enterprises, has gone so far as to brew a beer called "Bulldog Brew" just for sale on U.S. Marine bases. While demand for mass market beers is stagnant, sales of Washington's microbrews have risen 184 percent since 1987.[18]

High Performance Work Organizations Need Workers Who Think

Companies that pursue a strategy of market flexibility and responsiveness must rely on employees who can quickly adjust production processes to move in a new direction. These companies tend to share a set of traits that collectively describe a "high performance work organization." These traits include:

- A commitment to continuous improvement;
- Worker participation in decision making at the shop-floor or front-line level;
- The integration of technology into their work processes to a high degree;
- Cross-functional teams responsible for customer service, training, problem solving and product design; and
- Management by coaching, planning and facilitation, rather than enforcing.

High performance work organizations require high-skilled workers. Employees can't participate in decisions if they can't read the plant's production reports well enough to see the relationship between down time and financial performance. They can't operate computerized machines or understand statistical process control without some understanding of mathematics. And they can't contribute to a cross-functional team without basic communication skills.

To meet the needs of a high performance work organization, tomorrow's workers must not only receive job-specific and basic skills training. They must be able to:

- Adapt quickly to change;
- Perform more abstract work processes;
- Assume more decision making authority;
- Work in teams; and
- Understand system-wide needs.

Currently, only 5 percent of employers are estimated to be using methods that characterize a high performance organization.[19] It is unknown how many more intend to make the commitment to training and the new approach to management that such a workplace requires. But one thing is certain: This strategy can only be an option where the employer is either willing to train its workforce or there is already an adequate supply of skilled workers.

Implications

Washington's economy is changing. The jobs being created demand higher skills, and only higher-skilled jobs will pay a family wage.

Employers need trained workers. If employers can't find trained workers in Washington, they will look to other states or nations, or they will design new jobs so that high skills are less important and high wages are unnecessary.

Our citizens need jobs that pay well enough to provide a decent standard of living. Unless we equip our workforce with the skills to succeed in high-wage jobs, our society will become increasingly polarized into skilled "haves" and unskilled "have-nots."

Workforce training has become a key influence on Washington's economic future. The state's training and education system must ensure that tomorrow's workers attain the higher-order skills necessary to perform in competitive organizations. Major investments in the skills of current and future workers are essential.

But training is not the complete answer, says the National Center on the Educational Quality of the Workforce:

"Corporate managers must first embrace new ways of doing business, including high performance work organization as well as computer-integrated production. In close cooperation with schools on the one hand and workers on the other, the nation's employers can then begin the necessary upgrading of employee skills."[21]

Finally, workforce training and education must be coordinated with state and local economic development strategies. A knowledgeable workforce is a state resource and a "draw" for employers considering where to locate or expand their operations. Coordinating workforce development with economic development can help us attract the industries that pay family-wage jobs and enhance the economic prospects of our citizens.

TOMORROW'S WORKFORCE:

Will We Have the Skills We Need?

Washington's businesses will need increasing numbers of skilled workers. But two major population trends challenge our state's ability to meet that need. Growth in the workforce is slowing, and an increasing percentage of new entrants to the workforce have less education and fewer skills than did new entrants in the past. A third trend — the aging of the population — will increase the need to retain seniors in the workforce.

Slow Growth in the Workforce

Washington's working-age population grew by more than 25 percent each decade during the Sixties, Seventies and Eighties. This growth provided our employers with a ready supply of skilled workers to staff expanded operations. But Washington's population growth is slowing. Even with continued in-migration from other states and countries, growth in our working-age population is expected to slow to 20 percent during the Nineties, and drop to only 13 percent between 2000 and 2010.[1]

A lower birth rate is the main reason for this slower labor force growth. Also contributing to the slowdown is a drop in

— Continued —

"Just as we can't afford to write off any area of the state, we can't afford to squander a single individual's energy—least of all through the blindness of ignorance and prejudice. Our economic future and business climate is dependent upon respecting and encouraging diversity."

Washington State Governor Mike Lowry, 1994 State of the State Address.

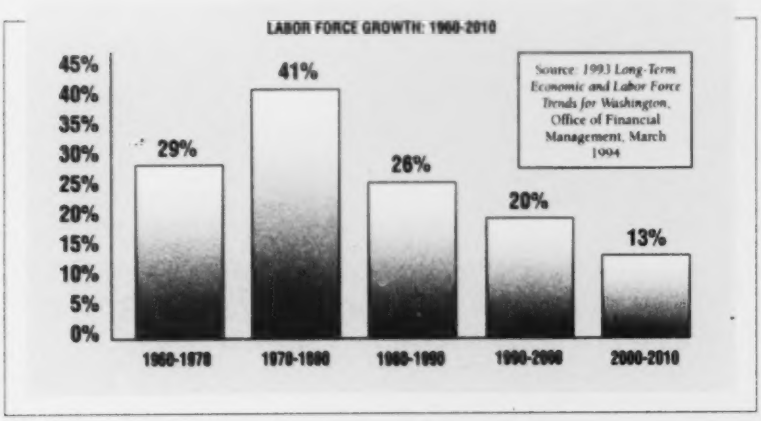
men's labor force participation brought on by improved retirement options, and a leveling off of the growth in women's labor force participation.

Washington's future economic growth could be constrained by limits in the supply of skilled workers. Shortages could develop, particularly in occupations which require technical training beyond the high school level.

This presents Washingtonians with an opportunity and a challenge. The opportunity is that good paying jobs may become available to a wider spectrum of people than in the past. The challenge is to ensure that our citizens have the skills necessary to succeed in these new jobs.

New Sources for Tomorrow's Workers

With a slowdown in labor force growth and an increase in the skill levels demanded by the jobs now being created, Washington's economy is going to need every available skilled worker in the state. Where will these workers come from? They could come from population segments that in the past have been under-represented in both technical training programs and the workforce at large.



Growth in labor force is slowing, creating the potential for shortages of labor and skills.

People of Color

Washington's population is gradually becoming more racially diverse. While the entire population is growing through births and immigration, the number of people of color is growing more quickly than the white population.

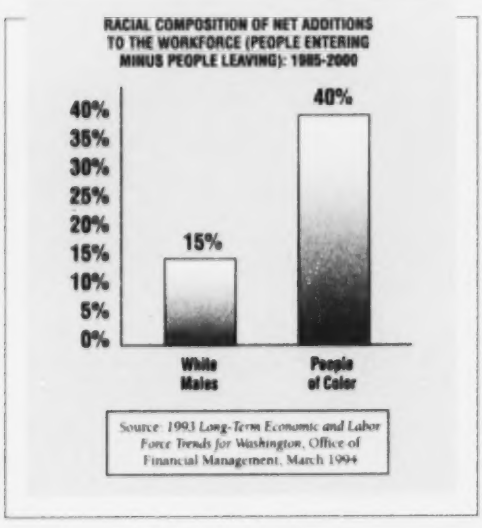
The Hispanic population in Washington is increasing faster than any other racial or ethnic group. By 2010, Washington will be home to 543,000 Hispanic people, an increase of 250 percent over 1991.[2] The number of Asians/Pacific Islanders will rise by a slightly smaller percentage to 519,000.[3]

Nationally, the number of youths of color will increase by 4.4 million between 1990 and 2010, while the number of white youths will decline by 3.8 million.[4] In Washington, nearly 20 percent of public school students in grades K-12 are students of color. As many as 90 languages are spoken by students in Washington's large urban school districts.

People of color are becoming a larger percentage of Washington's workforce. Forty percent of the net additions to Washington's workforce (people entering

minus people leaving) from 1985 to 2000 are expected to be minorities.[5] Only 15 percent are expected to be white males.[6] In 1990, 10 percent of Washington's working population was non-white; by 2010, 18 percent will be.[7]

For a variety of reasons, including racial prejudice, people of color have in the past obtained less education on average than whites[8] and have experienced higher levels of unemployment.[9] As a result, this growing population has a large, unmet need for education and training. Washington must satisfy this need. The combination of slower growth in the workforce and faster growth among people of color bring together a moral imperative for equal opportunity and an economic imperative for better-educated workers.



People of color will make up a larger share of net additions to the workforce.

The Limitations of Poor Basic Skills

According to the State Adult Literacy Survey, between 31 and 36 percent of Washington's adults perform at the lowest two (out of five) levels of proficiency in reading, math and problem solving.[11]

At Level 1, many adults are unable to respond to much of the survey. Others can only perform simple, routine tasks involving brief and uncomplicated texts and documents. For example, some can total an entry on a deposit slip, locate the time and place of a meeting on a form and identify a piece of specific information in a brief news article.

At Level 2, adults are able to locate information in text, make low-level inferences using printed materials, and integrate easily identifiable pieces of information. They demonstrate the ability to perform quantitative tasks that involve a single operation where the numbers are either stated or can easily be found in the text. But they are bound to have difficulty absorbing and using information in tomorrow's (or today's) increasingly complex workplace.

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The TreeTop Learning Center: Upgrading Basic Skills

Higher-level skills are essential in today's workplace — even in industries that aren't usually thought of as being high-tech. TreeTop, Inc., the Yakima-based apple processing cooperative, has recognized this. In 1991 it created a Learning Center to offer basic skills training to its employees.

"Our employees have to be proficient in math and communication skills to do their jobs effectively and ensure the quality of our products," says Duane Harris, Director of Training and Development. "But our interest in learning goes deeper. We want every employee to have every reasonable educational opportunity to be everything he or she can be."

TreeTop joined with Yakima Valley Community College to obtain a National Workplace Literacy grant to launch the Learning Center, located near the company's Selah processing plant and corporate office. When the grant expired, TreeTop continued to fund the Center independently.

Between 20 and 40 employees are enrolled at any one time, attending classes before or after work. Among the courses offered are developmental math, English essentials, writing, business communication and the use of PC-based word processing and spreadsheet programs. Employees receive certificates of completion attesting to their new competency.

"The curriculum is centered around reading, writing and math skills which are needed to successfully use statistical process control methods," says Jno Hinson, the Center's coordinator and instructor. "Students from the corporate office have found the classes in business writing and algebra helpful in improving their communication and computational skills and their overall job performance." Adds Director Harris, "Educating employees allows them to do their jobs well, gives them personal pride, and helps them become contributors to the community."

Citizens Who Are Economically Disadvantaged

Washington has thousands of citizens who lack basic skills such as high-school level proficiency in math and reading. Citizens who are economically disadvantaged, in particular, lack basic skills.

Many of these, such as farmworkers, are employed, but are unable to advance themselves because they lack transferable skills. Among the approximately 500,000 adults who are economically disadvantaged (defined as having incomes below 150 percent of the poverty line), 120,000 have no high school diploma or vocational training; 250,000 are unemployed or not in the labor market.[10]

Such citizens have substantial needs for basic workplace skills and occupational training that must be satisfied before they can take advantage of the opportunities the economy will present. Without sufficient foundation skills, these citizens won't be able to read the operating instructions that accompany today's increasingly complicated machinery. They'll lack the understanding of math needed to adjust computer-guided controls. And they'll be unable to compete for positions for which the ability to access and manipulate information is key.

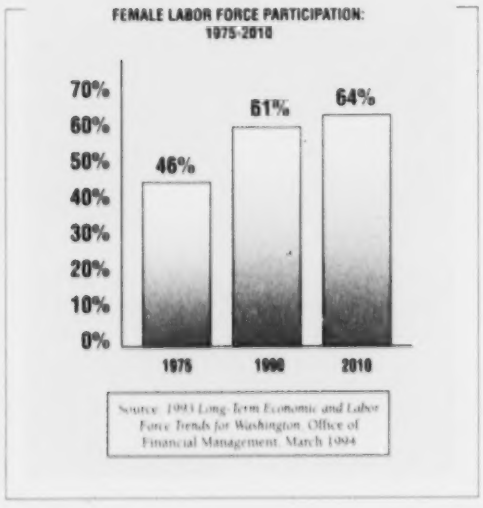
Women

Women have entered the labor force in vast numbers over the last 25 years. In 1975, 46 percent of working-age women in Washington were in the labor market.

By 1990, that number reached 61 percent. The State Office of Financial Management forecasts that by 2010, 64 percent of all working age women will be participating in the labor force.[12]

Although more women are working and there are fewer barriers to entering male-dominated fields, women's progress has been uneven:

- Women are still concentrated in clerical, sales, service and light manufacturing jobs.
- When women and men are in the same occupation, men still tend to have higher pay scales.
- Because of occupational selection, women continue to lack access to jobs with career ladders.



The percentage of women in the labor force will continue to grow.

- Only 16.8 percent of the participants in state-approved apprenticeship programs are women.[13] Many programs have no female participants.

Labor supply constraints for skilled occupations could sharpen the need to recruit and promote women. Employers who discourage sex stereotyping and provide "family-friendly" work environments will be more successful in recruiting and retaining the best candidates — male and female alike.

People with Disabilities

People with disabilities represent another human resource that Washington is underutilizing. Approximately 453,000 Washingtonians age 16 or older have work disabilities. Of these, 138,000 — or about 30 percent — are working. More than 314,000 are not in the workforce. But 54,000 non-working people with disabilities — 17 percent of the entire disabled population in Washington — say their disability does not prevent them from working.[14] Bringing these disabled people into the workforce would be like adding as many new workers as there are working-age people in the City of Everett.

Training a Diverse Workforce

Washington's workforce training system must adapt to the growing diversity of the workforce. Public institutions' record in this area — from the perspectives of employees as well as students — is mixed.

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Serving Students of Color

Washington's large urban school districts offer fewer vocational courses than do suburban or rural school districts. Because most students of color live in large urban districts, these students are under-represented among participants in secondary vocational education programs. In 1993, only 123 African American males completed a secondary vocational education program in Washington State.

With regard to enrolling minority students, post-secondary schools are performing well. Among the state's community and technical colleges, people of color (except Hispanics) are enrolled at rates higher than their incidence in the general population.[15] And in the past five years, enrollment growth for students of color has increased 44 percent, compared to an increase of 8 percent for white students.[16]

Once people of color are enrolled, however:

- They drop out in higher percentages than the population at large.[17] (However, because of minority students' higher-than-average initial enrollment, they still complete their courses of study in higher percentages than the general population. And Asian Americans' retention rate is higher than that of other population groups.)

- The rates of progress from remedial to college-level courses are lower for students of color than for white students.[18]

African American, Native American and Hispanic graduates of vocational programs are less likely than white graduates to be employed.[19] And those who do complete a community college program, Job Training Partnership Act (JTPA) program, or technical college program have substantially lower incomes than whites who complete the same program.[20]

Employing People of Color

Community and technical colleges have made substantial progress in employing people of color. Minorities comprise about 9 percent of full-time faculty — somewhat less than their 11.5 percent representation in the general population. More than 18 percent of administrators and 17 percent of classified staff are people of color. However, just eight of the top 119 administrators are people of color.[21]

People of color are under-represented in the ranks of those who lead and teach in our K-12 school system. Only 7.2 percent of all administrative, faculty and staff positions are held by people of color. And though nearly 20 percent of K-12 students are of color, only 5.6 percent of teachers are.[22]

Women in the Workforce Training System

Enrollment of women and girls in workforce training and education is generally equal to their incidence in the population,[23] although (as in apprenticeship programs) female enrollment in traditionally male fields of study is lower.

As employees, women are fairly well represented at all but the top levels of the community and technical college system. They comprise 42 percent of full-time faculty and 55 percent of administrative positions. However, only 13 percent of the deans, vice presidents and presidents are female.[24]

Within the K-12 system, 65 percent of the teachers are women, but only a third of central and unit administrators are female.[25]

These figures paint a picture of minorities and women being able to enter the workforce training system as students and employees, but not to achieve the same levels of success as their white male counterparts. To change this picture, we must insist that our K-12 schools and our community and technical colleges better support students of color, and we must find ways to create more opportunities for women and minorities to advance to positions of leadership in our educational institutions.

The Population is Aging

The leading edge of the baby boom is about to enter its 50s. Before long, this largest generation in American history will swell the ranks of the retired. Already, people over age 65 constitute the fastest growing segment of the population.

In contrast, the number of young people will remain largely the same from 1990 to 2010.[26] As a result, the ratio of active to retired workers may drop from 3:2 workers for every one retiree in 1992, to 2.7 workers for every one retiree in 2010. By 2030, the ratio could drop to 2 workers for every retiree.[27]

The aging of our population has at least four implications for Washington's workforce needs:

- Because a diminishing pool of younger workers will be supporting the Social Security benefits of an ever increasing pool of retirees, it will become even more important that younger workers are employed at the highest level of their skills and earning capacity.

- With fewer younger workers entering the labor force, employers will increasingly need to rely on retraining older workers to meet emerging skill needs. Older workers who regard learning as a lifelong pursuit, instead of something that ends with the completion of their formal education, will be best able to profit from these new training opportunities.

- New work arrangements may be needed to encourage retired workers to return or remain in the workforce as part-time employees.

- An increase in the number of employees supporting aging parents will demand more family-friendly policies in the workplace.

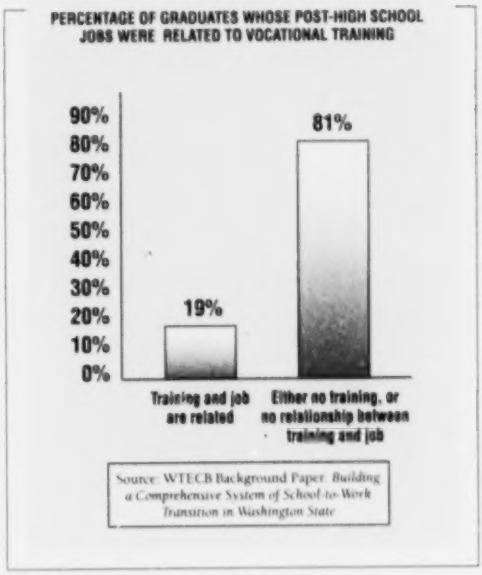
The Transition from School to Work

"In this community alone, we have 15 gangs — children who think it's more cool to bring a weapon to school than a notebook. We've got to come up with new ways to re-inspire and redirect the minds and hearts of our children and their parents. This is not going to be easy, but it can be done if we arm our colleges, schools and training providers with a competent diverse faculty and a competent, diverse administration."

Henry Beauchamp, executive director, Yakima Valley Opportunities Industrialization Center, testifying May 18, 1994 in Yakima at WTECB hearings on the Comprehensive Plan.

With fewer young people available, it is in everyone's interest to support high school graduates in their efforts to find a vocation. Currently, however, too many young people emerge from high school ready neither for college nor work.

Many of those who do not enroll and directly complete a college education spend years drifting from dead-end job to dead-end job before linking with a career/training track. When non-college-bound students do receive some vocational education, there is only a slim chance that the education is relevant to their post-high school employment. A study of 13 Washington school districts found that just 19 percent of graduates who were working full or part time after graduation held jobs related to the vocational training they had in high school.[28]



High school graduates' jobs are mostly unrelated to any vocational training.

We lack an effective system to help students make the transition from school to work. As a result, a large number of our young people are underutilized as workers.

Implications: We Can't Waste a Single Individual

Now, more than ever, we must equip our citizens with a firm foundation of basic skills and technical training. Without a skilled labor force, Washington will increasingly be a society of either rich people or poor people, with a diminished middle class. Employers won't be able to find qualified workers to staff tomorrow's high performance work organizations. Citizens will find themselves unable to compete for jobs in the most profitable and competitive companies. And we may discover that the best firms — those which offer family-wage jobs — move to or expand in places with greater availability of skilled workers.

Can we afford to have any of our workers be unemployed or *under*employed for lack of skills? Not if we want to preserve the quality of life we treasure. We must ensure that all of our citizens — people of color and whites, women and men, the economically disadvantaged and the prosperous — are trained and positioned for success. We can't afford to waste a single individual.

TODAY'S WORKFORCE TRAINING AND EDUCATION SYSTEM:

Will We Meet the Challenge?

Our global competition-driven economy and the changing composition of our workforce are presenting Washington's workforce training and education system with unprecedented new challenges. This diverse system encompasses more than 60 state and federal programs, hundreds of academic and technical institutions, and thousands of students and workers. Employers and private training organizations are partners in this enterprise.

To respond to the economic and demographic challenges facing us, the leaders in the workforce development system are:

- Adopting competency-based measures as the yardsticks of student achievement;
- Creating ways to improve students' transition from school to work;
- Easing transitions for dislocated workers;
- Moving to more customer-focused employment and training policies and services; and
- Increasing coordination among programs in order to provide higher-quality service.

These efforts are making the workforce training system more responsive to the needs of students, workers and employers. But much more needs to be done.

— Continued —

A Complex System

"The American economy now requires workers at every level who can think, reason, question, understand and contribute—people who can lead and participate. For the first time in this century, what employers most need is what parents and school people have always said they want high school graduates to do and be."

Marc Tucker, president of the National Center on Education and the Economy, publishers of *America's Choice: High Skills or Low Wages.*[29]

Responsibility for workforce training and education is shared by the state and federal governments, college and K-12 school districts, and the private sector. These entities direct a training and employment enterprise that includes:

- 236 high school vocational education programs;
- 32 community and technical colleges;
- 350 apprenticeship programs;
- 12 "service delivery areas" that operate under the Job Training Partnership Act;
- A wide variety of other employment and training programs targeted at workers who are older, disadvantaged, dislocated, low-skilled, disabled or veterans of military service;
- Employer-provided training;
- Private vocational schools and training providers; and
- State-run employment services.

The roots of this system were established in a simpler era. Vocational education programs were founded when the state was largely rural, and course offerings emphasized agriculture and home economics. Apprenticeship programs were originally designed for construction and machine trades and were traditionally filled mostly by white males. Public training programs for dislocated and disadvantaged workers were created in a piecemeal fashion as policy makers responded incrementally to structural economic changes or emerging socio-economic needs, such as education for veterans and employment assistance for workers whose jobs were lost after trade barriers were lifted.

A closer look at the major publicly funded providers of workforce training reveals how the system is being challenged by the more stringent demands of today's economy and society, and how these providers are responding.

High School Vocational Education

The first contact that a young person has with Washington's workforce training system is usually a vocational education program in high school. Two hundred and thirty-six[1] of the state's 296 school districts offer at least one state-approved vocational education program. In addition, eight regional "skill centers" operate under cooperative agreements between two or more school districts to provide specialized vocational training that the districts could not offer individually.[2] Approximately 85 percent of high school students enroll in at least one approved vocational education course per year in subjects ranging from computer-aided design to word processing.[3]

Vocational Education Has Been Underemphasized

Although the majority of the state's high school students receive some exposure to vocational education, many students do not consider these courses to be related to employment. Instead, they view the courses as electives offering skills, such as word processing, that will be helpful in pursuing further education.

Most schools' policies and curricula emphasize preparing students for college. Vocational courses are usually seen as less prestigious than academic courses, and even vocational courses that are the equivalent of academic courses have not been accepted by colleges as meeting entrance requirements.

The assumption that most high school graduates will go on for baccalaureate degrees is out of sync with the labor market, actual student behavior and the ability of institutions of higher education to absorb graduates. Three out of four jobs to be created between now and 2010 will not require a four-year degree.[4] At the same time, the demand for people with one or two years of post-secondary technical training is increasing. Despite this demand, just a sixth of graduating seniors complete a vocational education program.

In light of the increasing need for vocational education, the state has begun to bolster high school vocational programs. The current state operating budget includes $35 million to reduce voc-ed class sizes and increase the funds available for materials and supplies. The budget from the previous biennium funded the purchase of $4.9 million worth of high technology equipment for vocational programs. And House Bill 1936 achieved progress in encouraging four-year colleges and universities to recognize student competencies obtained in vocational classes by accepting such classes as meeting admission standards.

K-12 School Reform — Building Competency-Based Education

Two recent pieces of legislation — the Performance-Based Education Act of 1992 and the Education Reform Act of 1993 — will ultimately bring about fundamental differences in how we prepare our children to be successful as citizens and workers. The two laws make competency the central measure of student achievement.

High School Vocational Courses

Vocational course offerings in Washington's high schools vary significantly with district size, location, the district's philosophy of vocational education and the administrative support given to vocational education.

Most small high schools offer one or more courses in the areas of agriculture, home and family life, and business/office. A large high school may offer these, plus courses in trade and industry, health occupations and marketing. Large schools also offer more courses within each of these areas, and may offer vocational preparatory courses in junior high.

Differences in philosophies toward vocational education can lead to significant differences between programs. Consider the differences between the following two school districts, *which are of similar size and serve similar communities in the same geographic area.* School A offers 26 vocational education courses; School B offers twice as many — 52 courses. School A has a single metals-related course. School B offers four, including metal machining, metal fabrication and welding. School B also offers courses in food production, management and services; graphic design; nursing assisting; and horticultural science. None of these is offered at School A.

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"I'm convinced that the Certificate of Mastery is an idea that should be implemented across the country."

Frank Shrontz, chairman and CEO of the Boeing Company, April 13, 1994, at a national symposium on implementing the Certificate of Mastery concept.

The Performance-Based Education Act established the Commission on Student Learning, whose charter is to establish new student learning requirements, build an assessment system, develop criteria for a Certificate of Mastery to be achieved by all students, and create accountability methods based on student performance instead of compliance with state regulations. The Education Reform Act provides funding, direction and a timetable for school districts to redesign their curricula so students reach four broad goals (see box).

The State Education Goals

The Education Reform Act provides funding, direction and a timetable for school districts to redesign their curricula so students reach the following four goals.

GOAL 1. Read with comprehension, write with skill, communicate effectively and responsibly in a variety of ways and settings;

GOAL 2. Know and apply core concepts and principles of mathematics; social, physical and life sciences; civics and history; geography; arts; and health and fitness;

GOAL 3. Think analytically, logically, and creatively; and to integrate experience and knowledge to form reasoned judgements and solve problems; and

GOAL 4. Understand the importance of work and how performance, effort and decisions directly affect future career and educational opportunities.

Improving the Transition from School to Work

The reform envisions a system in which students would earn the certificate showing mastery of the four goals at about age 16, then spend their final years of high school in pathways that integrate academic and vocational learning.

The last years of high school would constitute the first half of a systematic transition from school to work, to continued education, or both. It would integrate on-the-job and classroom learning, and would provide both academic credentials and certified work skills.

At present, neither Washington nor any other state has a comprehensive system that accomplishes these objectives. The U.S. is one of the few industrialized nations without such a system. As a result, many of our young people waste their early work years in dead-end jobs or in training programs that fit neither students' aptitudes nor employers' needs. Other young people drop out of school because they fail to see a connection between doing well in school and obtaining a job that provides a decent living.

An effective school-to-work transition system would help students see the connection between school and work by providing them with exploratory career experiences that would increase their awareness of potential careers. Such a system would provide guidance to empower students to make informed career and educational choices. It would impart knowledge of an industry chosen by the student, build skills required by that industry, and engender a

sense of responsibility for quality products and services. And it would help students avoid needless years in low-skill/low-wage jobs that teach little more than what *not* to do for a living.

The Legislature has taken the first steps toward building a school-to-work transition system by adopting Goal 4 of education reform, which acknowledges the inevitable fact that virtually all people will enter the workforce eventually. The Legislature has also appropriated $2.5 million for grants to 30 local school districts for school-to-work programs that integrate vocational and academic learning, develop flexible educational pathways, and create partnerships with local business for work-based learning.

Among the approaches being tested are:

- Applied academics, which are courses that integrate theory and practice;
- Cooperative education, in which students receive on-the-job training through local businesses;
- Youth internships, such as Tacoma's Project Hope, which trains pregnant and parenting teens to be allied health and pharmacy technicians; and
- TECH PREP, a competency-based, four-year course of study that begins in high school and prepares students for mid-level technology occupations.

TECH PREP

TECH PREP is perhaps the most ambitious school-to-work reform program now underway. Funded largely with federal dollars, TECH PREP programs are in place at all 32 of Washington's community and technical colleges, 138 school districts, several Native American and private schools and colleges, and at three public universities.

By definition, TECH PREP couples the last two years of high school with the first two years of post-secondary education. The curriculum integrates occupational and academic education, and requires students to master competencies in communication, math, science and technology. Both academic and vocational/technical courses emphasize higher-order thinking, problem

Governance of K-12 Vocational Education

Overall policy for K-12 school systems is set by the State Board of Education, whose members are elected by local school boards. The Board's executive officer is the Superintendent of Public Instruction, who administers the Office of the Superintendent of Public Instruction. Elected school boards set policy at the district level.

Districts with approved high school vocational education programs are required to have general advisory councils and a program advisory committee for each vocational program. Composed of representatives from both employers and employees, these councils and committees help the schools match their programs to the needs of local industry.

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solving skills, computer-assisted learning and state-of-the-art technology.

Students who complete TECH PREP programs may receive an Associate's Degree, a certificate, or be credited with hours toward their apprenticeship. They can then either enter the workforce with better prospects for skilled employment, or continue their education at a four-year institution.

TECH PREP is still relatively new and while most students in the program have not yet graduated from secondary school, it represents a major step toward creating a seamless transition from high school to post-secondary education.

Federal Legislation Reforming Workforce Education

Two noteworthy congressional initiatives to bolster workforce training and education are the Carl D. Perkins Vocational and Applied Technology Act of 1990 and the School-to-Work Opportunities Act of 1994.

The Perkins Act specifies federal requirements for the use of federal money in secondary and post-secondary workforce training programs, including standards of accountability and requirements for coordination. The Act also funds programs to increase gender equity, improve school-to-work transition and technological education.

TECH PREP is an example of an initiative contained in the Perkins Act. The U.S. Department of Education administers the Act at the federal level; the Workforce Training and Education Coordinating Board is responsible for administering it here in Washington. Perkins Act funding for Washington State was $20.1 million in 1994.

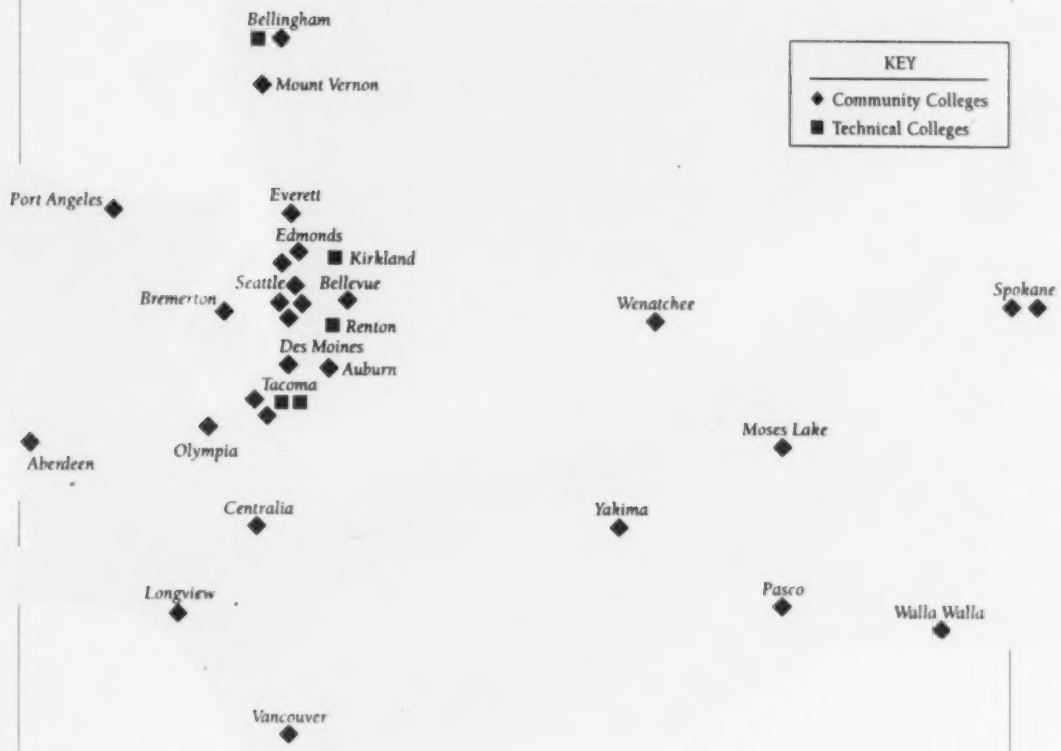
The School-to-Work Opportunities Act of 1994 provides incentives for states to develop school-to-work transition systems. Such systems are designed to improve student achievement and motivation by connecting school with work, and theory with practice. The programs are required to include:

- Structured worksite learning experiences for students;
- Integration between academic and vocational education, and between school courses and workplace learning; and
- Credentials for those who master the academic and vocational skills taught by the programs.

Community and Technical Colleges

Washington's community and technical colleges are the backbone of the state's adult workforce training system. They are required to "offer comprehensive educational, training and service programs" to "every citizen, regardless of his or her academic background or experiences, at a cost normally within his or her economic means." Washington's 32 community and technical college districts collectively serve

Community and Technical Colleges



- ■ Bates Technical College (Tacoma)
- ◆ Bellevue Community College
- ■ Bellingham Technical College
- ◆ Big Bend Community College (Moses Lake)
- ◆ Centralia Community College
- ◆ Clark College (Vancouver)
- ■ Clover Park Technical College (Tacoma/Steilacoom)
- ◆ Columbia Basin College (Pasco)
- ◆ Edmonds Community College
- ◆ Everett Community College
- ◆ Grays Harbor College (Aberdeen)
- ◆ Green River Community College (Auburn)
- ◆ Highline Community College (Des Moines)
- ■ Lake Washington Technical College (Kirkland)
- ◆ Lower Columbia College (Longview)
- ◆ North Seattle Community College
- ◆ Olympic College (Bremerton)
- ◆ Peninsula College (Port Angeles)
- ◆ Pierce College (Tacoma)
- ■ Renton Technical College
- ◆ Seattle Central Community College
- ◆ Seattle Vocational Institute
- ◆ Shoreline Community College (Seattle)
- ◆ Skagit Valley College (Mount Vernon)
- ◆ South Puget Sound Community College (Olympia)
- ◆ South Seattle Community College
- ◆ Spokane Community College
- ◆ Spokane Falls Community College
- ◆ Tacoma Community College
- ◆ Walla Walla Community College
- ◆ Wenatchee Valley College
- ◆ Whatcom Community College (Bellingham)
- ◆ Yakima Valley Community College

more than 138,000[3] workforce training students each year in 600 locations.

This system provides training in approximately 200 technical and professional occupations. The colleges also provide related classroom instruction for apprenticeship programs; basic reading, writing, speaking and math skills; retraining for dislocated workers; and the upgrading of skills for those already employed. Beyond its workforce training offerings, the colleges enroll students in baccalaureate transfer programs and provide opportunities for avocational coursework.

Nine out of 10 students who complete a community or technical college vocational program either find work (86 percent) or go on for additional education (6 percent). However, only a third of the students who enter training actually complete their degree or certificate.

Governance of Community and Technical Colleges

A nine-member State Board for Community and Technical Colleges, appointed by the Governor, oversees the system, which had a budget of $1.1 billion for 1993-95. Each college district has a board of trustees and a general advisory council and/or program advisory committee of private sector representatives to approve occupational programs.

Input from advisory committees is considered essential to quality training programs. Progressive advisory committees are taking an active role to bring their industry expertise to bear in designing curricula, identifying new technologies to be obtained, and participating in the hiring of key instructors.

Colleges' Role in Easing Transitions for Dislocated Workers

In a dynamic economy undergoing structural change, there is a vital need to help dislocated workers return to high-wage/high-skill jobs. One year ago, the Legislature enacted House Bill 1988, which provides training for dislocated workers at community and technical colleges. The colleges offer basic skills training, vocational education and supplemental instruction for apprentices.

The schools work in partnership with Private Industry Councils and with the Employment Security Department's Job Service Centers. These provide labor market information and support services such as counseling and referrals to training and jobs, as well as unemployment compensation benefits to those who qualify. Job Service Center out-stations on school campuses are helping dislocated workers and other students, too, access these services.

House Bill 1988 lowered the unemployment tax on employers by .12 percent and assessed a new tax of .12 percent to fund training each year for 5,000 full-time-equivalent students who are dislocated workers. Funding is also provided for financial assistance, child care and transportation.

Apprenticeship Programs

More than 350 apprenticeship programs within the state provide a combination of on-the-job training and classroom instruction in skilled construction, maintenance and operating crafts. Programs are supervised by joint labor/management committees that approve curricula, monitor quality, screen and select applicants and ensure that skills are portable. Contributions from employers and employees support the programs, which enrolled over 8,000 apprentices in 1992.

Nonetheless, very few apprenticeable occupations actually have apprenticeship programs. An example is the job of state patrol officer, which until recently had no apprenticeship program. Aspiring officers now have the benefits of the apprenticeship model — learning while earning, mentoring, certifying skills, and ensuring skills' portability. These principles could be extended to hundreds of other occupational learning situations for youths as well as adults.

The Washington State Apprenticeship and Training Council oversees apprenticeship training programs statewide. The Council's administrative arm is the Apprenticeship and Training Division of the Department of Labor and Industries.

Federally Funded Programs — A Fragmented System

Over the last 30 years, the federal government has assumed an increasing role in providing training and employment services to targeted groups of citizens. Among these groups are disadvantaged or dislocated workers, veterans, the disabled, workers with basic skill deficiencies, and welfare recipients.

Although state agencies administer most of the programs that provide these services, federal guidelines dictate program eligibility, set fiscal requirements, and specify how program performance is evaluated. Federal funding currently represents 30 percent of annual state spending for training and employment services.

The state's administrative structure tends to parallel the federal administrative structure. That structure is a complicated one. Fourteen federal agencies administer at least 154 different programs in education and employment.[6] Programs are frequently overlapping. For example, 40 different programs provide counseling and assessment for the economically disadvantaged.

Most federal programs were not designed in a way that permits their resources to be easily coordinated around customer needs. Each program has its own eligibility requirements, planning cycles and accounting categories. Each imposes its own management requirements on the states.

From the customer's point of view, the result is a bewildering array of piecemeal

"A central goal of policy should be to build a strong system, rather than simply develop isolated best-practice models... There are by now examples in the field of well-managed effective employment and training projects. However, they don't add up to a great deal because they are not linked in a systematic way."

Paul Osterman and Rosemary Batt of the Massachusetts Institute of Technology's (MIT) Sloan School of Management, writing in the *Journal of Policy Analysis and Management*, 1993.[10]

programs. Taken together with the diversity of public and private institutions that provide services, the customer faces a maze of different eligibility requirements, forms to fill out and hoops to jump through. These obstacles discourage people from obtaining the services they need.

Although several administration and congressional policy initiatives to improve coordination are under way, the programs have a long way to go to be truly responsive to the needs of participants.

Following is a description of the largest federal employment and training programs, who they serve, and how state and local governments participate in program administration.

Job Training Partnership Act (JTPA)

The Job Training Partnership Act establishes programs to prepare low-income youth, unskilled adults and dislocated workers for jobs. At the federal level, the Act is administered by the Department of Labor. Washington's Employment Security Department administers the Act at the state level on behalf of the Governor. The State Job Training Coordinating Council advises the Governor and Employment Security Department on the needs of disadvantaged and dislocated workers, and the use of federal funds to meet those needs.

Federal funding for JTPA programs in Washington is approximately $64 million a year, which served approximately 22,000 participants in 1993. Most funds are channeled to local agencies called "service delivery areas," which provide services directly or contract with other agencies or community-based organizations to provide services. Each service delivery area is governed by a Private Industry Council with majority representation from business.

JTPA programs have a tough task. Most JTPA participants enter the programs from circumstances that pose substantial educational, financial and other challenges to completing their schooling or finding work. This is reflected in the programs' success rates. Just 63 percent of adults who complete a program enter employment.[7] Among youth, 78 percent either return to school or find work upon completing their program.[8]

However, studies show that in some cases, youth who are similarly situated but who do not participate in short-term JTPA programs may do just as well without the programs. According to Labor Secretary Robert Reich, "Recipients of such training experience no discernable benefit compared with low-income people who don't get training." But, says Reich, programs that provide year round training for youth, such as Job Corps or Youth Fair Chance, do work.[9]

The short duration of most JTPA programs (an average of three to six months) may limit program effectiveness. And funding, all of which comes from the federal government, is only sufficient to address 5 percent of those who are eligible. This available money is less on a per-participant basis than state spending for community and technical college students. Hence, the

nation's primary program for assisting economically disadvantaged people is both underfunded and of limited effectiveness.

Job Opportunity and Basic Skills Program (JOBS)

The Job Opportunity and Basic Skills Program was implemented in 1990 to help welfare recipients fulfill their responsibilities to "support their children by preparing for, accepting and retaining employment." In 1991, 36,000 Washington recipients of Aid to Families with Dependent Children were enrolled in JOBS' employment and training activities, which were funded with $8.8 million from the federal government and a $5.6 million match from the state.

The U.S. Department of Health and Human Services administers the program federally. At the state level, it is currently administered by the Washington Department of Social and Health Services (DSHS) in cooperation with the state Employment Security Department (ESD). ESD delivers the employment and training services through a statewide network of 29 Job Service Centers, which refer clients to community or technical colleges, community-based organizations or other service providers for job search assistance, on-the-job training, and institutional training. DSHS staff provide family counseling and referral services.

Rehabilitation Act

The federal Rehabilitation Act funds vocational rehabilitation services for people who have physical or mental disabilities that create substantial barriers to getting or keeping a job. The Department of Social and Health Services administers the program, which in 1992 had funding of $29.3 million from the federal government and $8.5 million from the state to serve 9,800 enrolled individuals. The Division of Vocational Rehabilitation Services Advisory Committee advises the Department of Social and Health Services on issues related to vocational rehabilitation.

Employment Services

Employers seeking workers and citizens seeking jobs turn regularly to an employment service infrastructure that is funded by the Wagner-Peyser Act of 1933. Services are delivered through the Employment Security Department's Job Service Centers. Specific services include:

- Accepting applications from job seekers and job listings from employers;
- Matching applicants with jobs;
- Screening, testing, and providing employment counseling;
- Providing job search assistance, labor market and occupational information; and
- Supplying referrals to other training, jobs or services.

In cooperation with the Department of Social and Health Services and the Private Industry Councils, Job Service Centers provide these services to targeted groups such as disadvantaged workers and welfare recipients. Each Job Service Center has a Job Service Employer Committee, made up of representatives of local employers, to advise the Center about fluctuations in employment needs, including plans to hire or lay off, as well as service improvements needed.

Creating a Customer-Focused Re-employment System

The federal employment system described above has grown out of a nearly 60-year-old federal/state unemployment insurance and employment system that was designed for a mass production economy. In that earlier economy, the most common cause of unemployment was cyclical downturns in demand. Laid-off workers had reasonable expectations of returning to the same job once business picked up, or of migrating to growing firms that needed similar skills.

While this is still true, many more layoffs today are due to structural changes rather than cyclical downturns. The federal government has attempted to respond to this new environment by creating new programs as new structural changes occurred. As a result, there are now several different programs for different workers depending on whether they were laid off due to imports, defense closures, environmental changes, timber restrictions and other causes of economic restructuring.

The existence of so many separate programs makes it difficult for workers to know where to go to get the help they need or could benefit from. Workers may not be eligible for the kind of training or assistance they need, and the kind of assistance they are offered may not be what they want. The problem is compounded by the fact that true employment security today depends much more on a worker's ability to maintain marketable skills than on his or her ability to remain attached to a single employer.

Bellingham's Customer-Focused Center for Workforce Training and Preparation

Four state and local agencies have joined forces to create a cooperative learning center that helps people gain an education and prepare for work.

The Center for Workforce Training and Preparation provides client assessment and workshops in basic literacy and job preparation to long-term AFDC clients under 23 years of age. Clients are prepared to move on to community or technical colleges with a better chance of success. To date, half of the Center's participants have transitioned into jobs or job training.

The Center is jointly staffed and funded by the local Private Industry Council, Bellingham Technical College, the Employment Security Department and the Department of Social and Health Services. The organizational distinctions are invisible to the client, who sees only a team that provides assistance.

The Clinton administration is promoting legislation to update and supplement this "unemployment system" with a "re-employment system." The system would link employment benefits with participation in re-employment services which would be available to all workers, laid-off or not, through a network of customer-oriented career centers. To help workers transition to a new job, these centers would offer:

- Job search assistance,
- Labor market information,
- Assessments of workers' needs,
- Counseling,
- Consumer-oriented information on how well various training providers perform in training and placing their students,
- Referrals to training, and
- Income stipends.

Workers themselves would decide which services, training and education would be appropriate to meet their career goals.

Past efforts by states to create a customer-focused one-stop career service have not gotten far because they ran into restrictions imposed by existing laws and regulations. However, the proposed legislation would grant waivers to states seeking to create accountable state-level systems that would complement the federal system. In anticipation of this or similar legislation becoming law, the Employment Security Department has begun planning an "integrated service delivery system" for the state, and has earmarked $5 million of current funds to support pilot projects.

Employer-Provided Training

Depending upon the employer, the training that Washington employers offer their employees directly or through other providers ranges from being extensive to non-existent. A 1990 survey of Washington businesses found that 57 percent of Washington employees work for companies that have a formal budget for training. Half of these firms spend 4 percent or less of their total labor costs on training. The most common percentage of labor costs devoted to training was only 1 percent. A third of all Washington employees work for companies which provide no formal classroom vocational training.

In-house formal training is limited to larger companies. Eighteen percent of the training provided by these companies is directed at lower-level office and production workers, while more than 50 percent is for managers.

The survey found that one-half of all employers feel they do not have the resources to provide training. About one-fifth expressed concern that trained employees would be lost to competitors. Another fifth said training is not a profitable investment, and that providing training is not a role the company should play. Employers expect the K-12 system to provide a firm foundation of basic skills, and say that the public education system, rather than the private sector, should take responsibility for training disadvantaged populations.

Private Vocational Schools

Private vocational schools are independent businesses providing occupational training. More than 230 such schools are licensed in Washington. They provide between 150 and 175 different instructional programs to approximately 39,000 full-time and 9,000 part-time students. No public funds are appropriated for the schools, but eligible students may obtain federal grants and loans to pay for educational expenses if the school they choose has been authorized to participate in federal student aid programs.

Each school establishes its own admission requirements. These generally consist of a high school or equivalent diploma, an interest in the field and a demonstrated ability to benefit from the program. Flexible program scheduling, small classes and student-centered teaching techniques make these schools attractive to many.

Private vocational institutions are licensed by the WTECB. A small but growing number grant associate and baccalaureate degrees. Those that do are regulated by the Higher Education Coordinating Board.

Public/Private Partnerships

Washington's workforce training and education system is already very much a partnership between the public and private sectors. Private employers, along with the workers they hire, are the prime beneficiaries of the system. Private sector representives advise the system's public institutions as members of the formal advisory boards mentioned in the preceding pages.

However, the economic imperative for a trained and productive workforce demands an even greater partnership between the public and private sectors. Consider these needs:

- If our schools are to produce people with the skills our employers and employees need, the schools must know from employers what skills to teach and what standards to meet.
- If the skills of our graduates are to be state-of-the-art, those skills must be honed on state-of-the-art equipment, which only the private sector can identify (or make available to students, in some cases).
- If students are to obtain on-the-job experiences that will help them develop skills and make career choices, those students must work with firms who can provide such experiences.
- In a world of limited resources and international economic competition, employers, workers and educators must achieve a consensus on the need to devote our scarce resources to the task of workforce training and education. We must work together to design programs that are effective and affordable.

The existing relationships between the public and private sectors in the areas of workforce training and education are an

excellent foundation upon which to build. Examples of successful partnerships include:

- The Boeing Company's support in developing high quality applied academics programs and integrating these programs with TECH PREP. Boeing has provided more than $3 million over the past four years to support TECH PREP and is sponsoring internships for students and teachers.

- Westinghouse and Battelle are providing more than 300 paid internships for Hanford-area high school students. They have formed a Council of Educators and Contractor Representatives to act as a coordinating body for all education and training needs in the area from pre-kindergarten to adult.

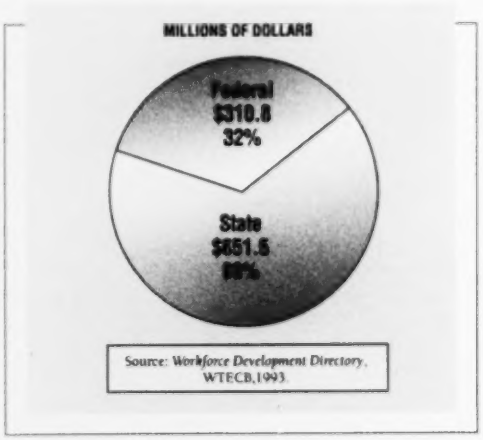
- The Seattle-King County Private Industry Council is providing summer work experience programs as pilot sites for Summer Beginnings, a Department of Labor project to demonstrate ways to connect skills learned in the classroom to tasks performed on the job.

More such partnerships are needed to improve the transition from school to work as well as to provide schools with the essential human and financial resources they need to fulfull their basic mission of educating our youth. The workforce training and education system can only serve the needs of its customers if all the stakeholders in the system work together.

Funding

The majority of public funding for workforce training and related programs comes from state and federal resources. Total funding for 1992 was approximately $962.3 million. Of this amount, the state provided 68 percent ($651.5 million) and the federal government provided 32 percent ($310.8 million).

State control over how funds are spent is exercised in the setting of maximum funding levels and in the amounts set aside in categorical blocks. For example, the Legislature appropriated $57.9 million for the Office of the Superintendent of Public Instruction to implement the Educational Reform Act for the 1993-95 biennium. The legislation set aside categorical blocks such as $3.3 million for the Commission on Student Learning and $1.8 million for school-to-work transition. Within these broad legislative appropriation parameters, local education and training institutions



Sources of Workforce Development Funds: 1992

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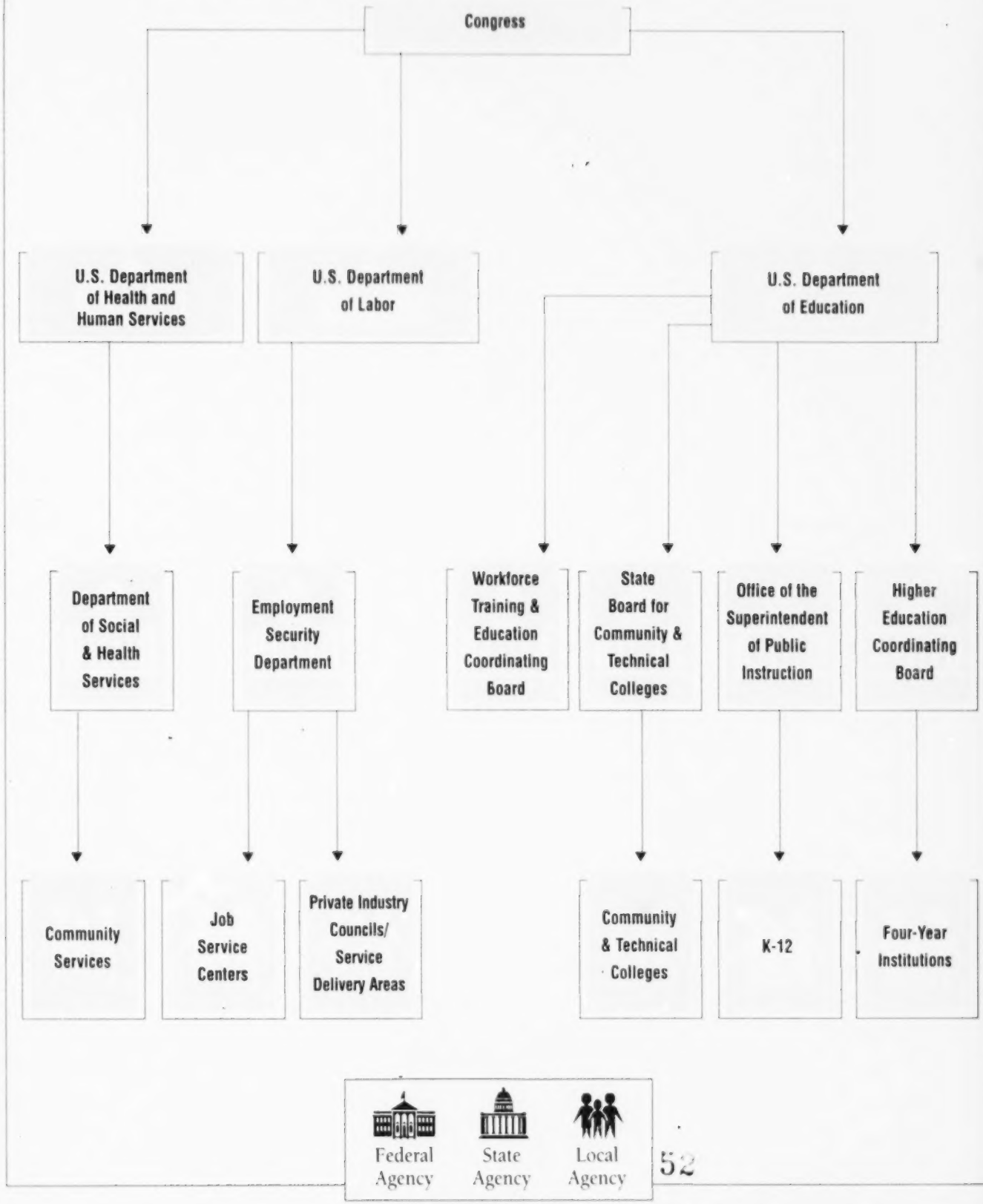
Flow of Federal Funding



have a great deal of autonomy in deciding how best to apply the funds to meet local needs.

Federal programs designed to meet the needs of specially targeted populations have more constraints on the use of funds. The flow of federal funding is illustrated by the chart on page 44.

Five agencies account for 97 percent of the total state and federal funding for workforce training and education. They are the State Board for Community and Technical Colleges, the Office of the Superintendent of Public Instruction, the Employment Security Department, the Department of Social and Health Services and the Department of Labor and Industries.

The chart below shows the dollars budgeted for workforce training and education by each of the above-mentioned agencies. These amounts include federal funds.

Workforce training and education expenditures (including federal funds) represent approximately 7 percent of the state's 1993-95 operating budget.

Impact of Initiative 601

The state's budget for the 1995-97 biennium will be the first budget written under Initiative 601, which limits state general fund spending. Preliminary estimates indicate that the Initiative will limit state general fund expenditures to a level that may be insufficient to meet the cost of ongoing services and cost-of-living adjustments. As a result, there will be little opportunity for funding new policies or programs, or expanding existing programs, using the general fund.

Annual Funding for Workforce Development, by Agency

The following amount represents only that portion of the agency's funding which is devoted to workforce training and education and related services.

	Millions
State Board for Community and Technical Colleges	$218.3
Office of the Superintendent of Public Instruction	$161.9
Employment Security Department	$89.8
Department of Social and Health Services	
Division of Developmental Disabilities	$335.5
Other divisions	$82.2
Department of Labor and Industries	$44.4
Other agencies	$30.2

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There are, however, other areas of state spending — such as some trust funds — that apparently are not covered by the Initiative. Also, the Initiative does not limit revenue, only spending. Forecasters say the state may collect more revenue during the next biennium than the state is authorized to spend. Because of these features of the Initiative, advocates of additional resources may turn to non-general fund sources of money or to tax incentives that could affect private sector behavior without state expenditures.

Accountability

A system of accountability is essential to the success of our workforce training and education efforts. We must have the ability to evaluate whether we are "doing the right things and doing them right."

Washington State currently does not have an accountability *system* for workforce training and education. What we do have are separate accountability activities for each of our workforce training and education programs.

K-12 Accountability

Accountability of K-12 is decentralized and is undergoing change as part of education reform. The Office of the Superintendent of Public Instruction (OSPI) collects and analyzes some data, but school districts maintain most data, and evaluation methods vary from one district to another. There is no statewide process that tracks what happens to students after they leave high school (except students who complete a vocational program) or how their post-secondary education or employment is related to their K-12 education. OSPI relies on standardized achievement tests and high school completion rates as the main methods for evaluating student outcomes.

Community and Technical Colleges

The State Board for Community and Technical Colleges collects and evaluates statewide data for purposes of developing policies and budgets. Research methods include surveying former students and their employers, and tracking employment results by matching the records of former students against wage records gathered by the Employment Security Department. Individual colleges, college departments and faculty members conduct their own evaluations in order to measure and improve the quality of local programs.

Job Training Partnership Act

Accountability for the Job Training Partnership Act (JTPA) is driven by federal requirements. States have some discretion to add to these requirements, but Washington has not done so on an ongoing basis. Since individuals must meet certain federal eligibility requirements in order to be served by JTPA, large volumes of data are collected on each applicant. The U.S. Department of Labor's performance standards dominate the evaluation of JTPA results. These standards are based on the status of former participants 13 weeks after exiting a program.

System-Wide Accountability Needed

Because these accountability activities were developed in order to meet separate program missions and requirements, they do not add up to systemwide accountability. There are no agreed-upon measurable goals for the workforce training and education system as a whole, and no standards for collecting data in a consistent fashion from agency to agency. Some workforce training and education programs do not evaluate what happens to their participants once they have left their program, or use these results to guide improvements.

Positive developments, however, are underway:

- The community and technical college system is using evaluation research to guide policy and budget decisions and local program improvements.
- OSPI is testing the use of data matches in evaluating student outcomes. (Data matches compare information we have about a student in one database, such as school records, to information we collect in another database, such as Employment Security records.)
- The Commission on Student Learning is developing performance-based assessments of student abilities.
- Recent changes to the JTPA have increased the amount of standardized information that is available on program customers and the services they receive.

But much more needs to be done. The National Governors' Association (NGA) has selected Washington as one of six states for which the Association will provide technical assistance to build an accountability system for workforce development. During the 15-month project, WTECB will lead interagency teams of policy makers and technical experts. The teams will explore such issues as establishing measurable goals and performance standards, designing a coordinated data system, using skill assessments as part of program evaluations, using program evaluations for continuous quality improvement, and developing consumer reports of program outcomes.

The WTECB's Role: Planning, Coordination and Evaluation

The economic and demographic imperatives for workforce training and the fragmented nature of the workforce training and education system created a need for a coordinated, state-wide approach to planning, coordinating and evaluating Washington's workforce training efforts. The WTECB was established in 1991 to address these issues and, in coordination with the other agencies responsible for training and education, to advise the Governor and Legislature.

The WTECB's responsibilities cover secondary vocational education, community and technical college vocational programs, apprenticeships, programs governed by the Job Training Partnership Act and programs for adult literacy. In addition, the Board regulates private vocational schools and

administers the Carl Perkins Act and the Job Skills Program.

Developing and maintaining this comprehensive plan for workforce training is one of the primary tasks given to the WTECB by its founding legislation. Other responsibilities assigned by the legislation are:

- Review the state's workforce training and education system for consistency with the plan;
- Promote coordination among workforce training and education programs at the state and regional levels;
- Assess the workforce training and education needs of employers and workers;
- Develop a consistent and reliable workforce training and education database for service delivery and evaluation;
- Evaluate the results of the training system as a whole and establish minimum standards for evaluating programs within the system; and
- Advocate for the workforce training and education system to meet the needs of employers and workers.

Since the WTECB began operating, the Board has (in addition to preparing this plan):

- Published the *Workforce Development Directory* of all of the state's workforce training and education and related programs;
- Prepared the Legislature's successful application for the "Investing in People" project on workforce preparation policy, which is sponsored by the National Conference of State Legislatures (and which the WTECB continues to support);
- Coordinated the development of the state's planning grant application for the School-to-Work Opportunities Initiative;
- Wrote the state's successful grant application for the National Governors' Association's accountability project;
- Developed priorities for the training funded under House Bill 1988 (community and technical college training for dislocated workers);
- Published *Plan for Tomorrow Today*, a student's career guide to vocational education offerings in the state; and
- Completed the biennial update to the state plan required under the Carl Perkins Act.

Implications

The workforce training and education system is large and complex. Because it developed in stages over a long period as various needs emerged, it is not so much a coordinated system as it is a collection of related programs and institutions trying to achieve similar goals. It could serve Washington more effectively if it operated in a more coordinated fashion, pulling together people and resources in a package that anticipated — rather than reacted to — customer needs. To be capable of anticipating needs and addressing them in a coordinated fashion implies that:

- The many participants in the system — be they from the public or private sector, or representing providers or recipients of services — should share a common vision of what the system should accomplish.
- The system should have a customer focus that integrates employment and training-related services, and coordinates programs.
- A fundamental measure of the success of the workforce development system should be the competency of the students and workers it produces.
- Our programs and institutions must be accountable for their efforts to produce competent students and workers.
- The public must become more aware of the importance of workforce development and lifelong learning, and of the inherent value and dignity of a technical education.
- Students need an educational system to facilitate their transition to the world of work.
- Only a partnership between the public and private sectors will be able to provide the insight, resources and sustained commitment needed to build a workforce development system capable of meeting the challenges we face.

Washington's system of workforce training and education is advancing. We are taking major steps to be more customer focused, accountable and strategic. We must build on these efforts in our plan for the future.

Recommendations

The Destination: A World-Class Workforce

In the coming century, the driving force of Washington's economy will be the human mind — not, as in the past, our natural resources, or even our industrial capacity. In an age of global competition for good jobs, the countries that thrive won't be those with the most minerals or the mightiest military; the superpowers of the future will be the countries with the best-educated, most innovative, and most productive people.

This economic fact of life is a mandate for improving our training and education system. The prosperity and security of our country depends on our ability to become a nation of learners and teachers.

— Continued —

"Today's critical problem is how to improve job opportunities for the two-thirds of America's young people who do not complete a post-secondary education."

Robert I. Lehman, professor of economics at the American University of Washington, D.C., writing in the *Vocational Education Journal*, March 1994.[1]

The Starting Line: What Can We Build On?

Washington is already in the forefront of the transition to higher standards of educational achievement and lifelong learning.

- We were the first state in the nation to make pre-school education available to all low-income children.

- We are in the midst of a major restructuring of our public schools to raise academic achievement expectations and results for all students. Our reform will encourage all students to learn as much as they can, as fast as they can, because it will measure students' mastery of skills and knowledge rather than the amount of time they spend in class.

- Together with our public schools, our community and technical colleges are at the forefront of the movement to rethink and redesign the links between secondary and post-secondary education. They are also creating new links between classrooms and workplaces. To support and extend these efforts, Governor Lowry has convened a Governor's Council on School-to-Work Transition to ensure that all students — not just those who go on to four-year colleges — get the preparation they need to land family-wage jobs.

- Our Employment Security Department is engaged in new efforts to provide coordinated and accessible employment and job training services to its customers.

- In 1990, Governor Gardner and the state Legislature convened an Advisory Council on Investment in Human Capital. In 1991, the Legislature acted on the Council's recommendations and created the Workforce Training and Education Coordinating Board (WTECB) to help coordinate, support and publicize the changes that must take place if we are to achieve a high-skill, high-wage workforce.

But these are the first steps on a long road.

Obstacles in Our Path: What Must We Overcome?

From a citizen's point of view, most of these changes are still invisible or unknown.

Today, citizens face a bewildering array of piecemeal programs, a forest of federal and state agencies, and scores of public and private educational institutions — each with different eligibility requirements, different forms to fill out and different hoops to jump through. Our programs do not always have the capacity or the focus on customers necessary to meet people's needs.

The result is that far too many people never find the training and education they need.

- A young woman drops out of school or graduates without a clue as to what kind of work she wants to do or what skills she will need to get a good job.

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- A worker who has spent most of his life earning good money in a mill or factory that is suddenly closing is astonished to learn that he has no marketable skills.

- Adults who have recently arrived in this country are overwhelmed by both the language barriers and the educational requirements necessary to succeed in the land of opportunity.

How will they know what educational opportunities are available to them? What information will they have to evaluate the quality of the programs they encounter?

And, even more fundamentally, how will our young people and our adult workers come to understand their own need not just for a high school diploma, but for a lifetime of continuous learning?

Mapping the Route to Success

We envision a workforce training and education system that supports a high-wage, highly-skilled workforce. Such a system will:

- Be customer driven — organized around the needs of students, workers and employers;

- Be easy to find and enter, and be designed so that people can move easily among and between programs, and between programs and the workplace;

- Meet the needs of all learners, including those who have been underserved in the past because of racial, ethnic or cultural differences; gender; disability or learning style;

- Provide support services such as career counseling, child care and financial aid to those who need them;

- Be competency-based, so that all students are able to master the skills and knowledge they need in as much or as little time as they need to do so;

- Be staffed by people who are prepared to teach a diverse student body, and who have relationships with employers that help them stay up to date on changes in their fields;

- Be coordinated with private sector training programs, with social and other services, and with economic development strategies;

- Be based on full partnerships between business, labor, and training and education representatives;

- Promote the dignity of work and the value of workforce training and education;

- Rely on the best labor market information, so that people acquire skills that local industries need;

- Provide students and workers with a foundation of basic skills that equip them to be lifelong learners; and

- Be accountable for results, and committed to using outcome measures to continuously improve program quality.

"In the 19th century, at most, young Americans needed a high school education to make their way. It was good enough if they could read well and understand basic numbers. In the 21st century, our people will have to keep learning all their lives."

President Bill Clinton, speaking to the American Council on Education in February 1994. [2]

Three Goals for Workforce Training and Education

This plan is based on three overarching goals:

- Ensuring that the people of Washington will succeed in an economy that requires higher levels of skill and knowledge,
- Ensuring that all Washington residents have opportunities to learn and to advance in their chosen field of work throughout their lifetimes, and
- Changing the way we learn and teach, so that all training and education programs are customer-driven, competency-based and focused on achieving results.

The Most Urgently Needed Actions

Many changes in our attitudes and actions will be necessary to achieve these goals, and those changes are outlined and explained in this plan. Indeed, the goals and recommendations in this plan should guide the agencies of the workforce training and education system in budget and policy planning.

The most urgently needed actions are:

1. *Confirm a coherent vision of a system of lifelong learning:*

   Within one year, the Governor should convene a summit of all statewide policy makers involved in education and job training for the purpose of confirming a shared vision for all education, from pre-school through adulthood.

2. *Develop a competency-based workforce training and education system:*

   Within five years, workforce training and education agencies will develop student performance standards and assessments that are competency-based and transferable across all training and education programs. Organizations responsible for professional development will make their programs competency-based.

3. *Serve the needs of an increasingly diverse population:*

   Within two years, workforce training and education programs will develop goals and strategies for increasing the success rates of people of color, women and people with disabilities.

4. *Make workforce training and education accountable for continuous quality improvement in meeting customer needs:*

   Within one year, WTECB, in collaboration with other agencies and partners of the workforce training and education system, will establish measurable goals, or benchmarks, for workforce training and education. Within two years, all workforce training and education programs will measure results in order to track progress toward these goals

and to continuously improve programs and policies.

5. *Increase public awareness about the importance of workforce training and education:*

   For the next three years, WTECB, together with its partners in both the public and private sectors, will lead a statewide effort to engage the public in a discussion of the need for higher levels of skill and knowledge and the importance of personal and corporate responsibility for lifelong learning.

6. *Build partnerships between the private sector and workforce training and education, including work-based learning and skill standards:*

   For the foreseeable future, WTECB, the workforce training and education agencies, and statewide associations of labor and business will collaborate in building the capacity of the private sector to participate in training and education policy and program development and implementation. The aims of such partnerships will include the integration of work-based learning with school-based learning, and the development of up-to-date occupational skill standards and assessments.

7. *Integrate employment- and training-related services so that they are easier to find and enter:*

   The Governor should continue to take leadership to establish "one-stop" or integrated service delivery systems for employment- and training-related services.

8. *Consolidate programs where coordination and efficiencies can result:*

   By January 1, 1995, WTECB will, as required by House Bill 1988, "conduct a study in consultation with the Higher Education Coordinating Board on the feasibility of: (a) redirecting all state and federal job training and retraining funds distributed in the state into a separate job training trust fund; and (b) distributing the funds according to uniform criteria."

9. *Coordinate workforce training and education with state and local economic development strategies:*

   For the foreseeable future, the Department of Community, Trade and Economic Development and the workforce training and education system will promote the development of high performance work organizations by developing industry consortia in high value-added sectors of the economy, and providing them with assistance in employee training, human resource organization, ISO 9000 certification, export assistance and other services.

10. *Make the last years of high school part of a school-to-work transition system:*

    Within five years, schools will provide educational "pathways" to students who have completed a Certificate of

"Once we get them into workforce training, how do we keep them there? Some issues that are involved around retention are financial aid and the issues of child care and transportation. If we don't address those issues while we've got them there, we're going to lose them."

Dan Chacon, vice president of student services at Spokane Community College, testifying May 24, 1994 in Spokane at WTECB hearings on the Comprehensive Plan.

Mastery. These pathways will be organized around career majors that integrate academic and vocational learning, and school-based and work-based education. Essential learning requirements will be developed for the period between completion of the Certificate of Mastery and high school graduation.

11. *Improve the basic skills of today's workforce:*

    Within the next year, the Adult Education Advisory Council and the State Board for Community and Technical Colleges should develop guidelines and policies to increase the success rate and quality of adult basic skills education programs, and integrate basic skills instruction with occupational training.

The following pages present all of the recommendations made by the Board. Specific action steps are in bold.

The Vehicle: A Customer-Driven System of Workforce Training and Education

Confirming a Common Vision

Our challenge is to develop a seamless, accessible and responsive system of workforce training and education out of the program puzzle pieces that are currently scattered among state, federal and local agencies and businesses. Each program must be a planned part of a coherent system, and, at the same time, we must cut through the red tape that stifles local creativity and innovation.

The picture that must emerge from today's puzzle pieces is this: All Washington citizens must have access to a training and education system that is customer-driven, accountable for results, and built on active partnerships among business, labor, community organizations, education and government.

Events such as the 1993 Education Summit of all the state-level policy makers involved in workforce training and education can foster a common vision, clarify the role of statewide policy, and coordinate state leadership. **Within one year, the Governor should convene a summit of policymakers in order to confirm a common guiding vision for a coherent system of lifelong learning.**

Our ability to sustain a common vision can be complicated by the proliferation of boards, councils, commissions, and other policy bodies in Olympia. They can also be confusing to local partners in training and education. **WTECB recommends that the Governor and the Legislature act with caution in creating additional policy bodies.**

Competency-Based Learning

The common thread running through workforce training and education must be competency-based learning.

The Commission on Student Learning is endeavoring to change primary and sec-

ondary education from a system based upon the time students spend in class to a system that is based on the ability of students to demonstrate the mastery of specific skills and knowledge. The community and technical colleges are advancing competency-based learning through TECH PREP and the development of technical degrees. Apprenticeships have long provided competency-based learning.

But more must be done.

Within five years, competency standards should be widely recognized so that what students learn is accepted throughout the training and education system and in the private sector. Skills and knowledge should be recognized no matter where or how they are obtained.

In addition, the training and education agencies and the private sector must collaborate on the development of skill standards and certificates for occupational clusters. And the training and education agencies must agree on competency standards that are accepted for admission and credit across the system from K-12 through four-year colleges and universities.

Competency-based learning — fortified by employer hiring and promotion practices that reward such achievement — is the key to customer-based coordination that will make the training and education system truly seamless.

Diversity

In Executive Order 93-07, Governor Lowry directed "all state agencies and institutions of higher education to initiate actions to integrate the principles of diversity into all facets of workplace community and in the delivery of services to the people of Washington."

Workforce training and education programs must be user-friendly for all people. The programs' staffing and administration should include women, people of color and people with disabilities. We must make special efforts to assist populations that have been traditionally underserved.

To do this, new attitudes, behaviors and practices will be needed. **Diversity and gender equity training should be required for members of policy boards and management staff of training agencies.**

Completion rates of people of color have traditionally been lower than those of whites. **The workforce training and education agencies should develop goals and strategies for improving the retention and completion rates of people of color. Similarly, the agencies should develop goals and strategies for improving the enrollment and retention rates of girls and women in training and education for occupations that have been disproportionately filled by males.**

The employment rates of people of color and people with disabilities in faculty, administrative/supervisory and classified positions, and women in administrative

positions must be increased to better reflect the mix of the participant population, so that staff can serve as role models for all students. **The workforce training and education agencies must develop goals and strategies for recruiting and hiring people of color, women and people with disabilities.**

Many other specific actions must be taken to increase the success rates for historically underserved populations.

Washington's large urban school districts offer fewer vocational courses than do suburban or rural school districts. Because most students of color live in large urban districts, these students are under-represented among participants in secondary vocational education programs.

School districts in our largest cities, and other districts with large numbers of students of color, should engage students in learning by linking school to the workplace through model school-to-work programs that effectively prepare students for the world of work and for further education and/or training. This step is necessary to provide urban students the same opportunities that are available to their peers in suburban and rural areas.

Joint apprenticeship committees should take action to increase the percentage of women and people of color in apprenticeship programs.

Post-secondary training institutions should, in coordination with joint apprenticeship committees, make pre-apprentice and other nontraditional training available to all interested women and people of color.

Schools should provide bilingual instruction to students who are not ready to learn solely in English.

Schools should set systems in place to recognize and meet the special learning needs of people with disabilities, including learning disabilities.

Giving Customers the Keys

To really put customers in the driver's seat of our training and education system, we must give them the information they need to use and to evaluate the training and education system, and the information they need to participate in the public discussion about how we should respond to the growing need for higher levels of skill and knowledge.

The keys to the system are public accountability for results, and public engagement in the process of change.

Accountability

Consumer Reports:
Informing the Public About Results

To make the workforce training system accountable to the public for its performance, WTECB and the other training agencies and partners must inform the public and policymakers of the results of workforce training and education programs.

WTECB will issue biennial reports that present the latest accountability findings and actions for workforce training and education.

WTECB and the other training agencies and partners will use the National Governors' Association (NGA) Project to collaboratively develop "Consumer Reports" of program results. The reports will be available to potential customers to empower them to choose the program that best meets their needs. The resulting change in program participation rates could, in some cases, drive budget and program decisions to better reflect customer demand.

Measuring Results

The workforce system must accurately measure the results of training and workforce education in order to know how well the system is performing and where improvements are needed. These measurements should include scientifically-based evaluations that are designed to be as objective as possible.

To measure results, beginning within two years, workforce training and education programs will evaluate the experiences of former program participants to see how their job and other experiences have changed as a result of their training and education. These follow-up evaluations will include data matches with Employment Security wage records and other methodologies, such as surveys and focus groups of former program participants and their employers. WTECB will also analyze the results of the state sample for the National Education Longitudinal Study of the Eighth Grade Class of 1988.

For the purpose of measuring the actual effectiveness and efficiency of state programs, WTECB will contract with outside evaluators to conduct net impact and cost-benefit evaluations of major new programs. WTECB will also use the household and employer survey results to construct a quasi-experimental model of the net impact and costs and benefits of workforce training and education.

While the emphasis of the accountability system will be on results, it is important to also know whether programs are implemented as intended; otherwise we would not know if the results we observe are related to the intended implementation strategy. WTECB will provide for formal process evaluations to determine how programs are actually implemented, including the extent of coordination and the involvement by the private sector.

Finally, in order to measure results, the training system needs better data systems. WTECB, training agencies and their partners will use the NGA project to analyze such issues as common data elements and definitions, participant confidentiality, avoidance of duplication, more portability of data between programs, and whether there should be a unified data system for workforce training and education.

Assessing Customer Needs

WTECB and its partners will assess customer needs for workforce training and related services. We will use these assessments to develop goals for the future of the training system and to help program providers determine what their customers really need.

Actions to assess customer needs will include periodic surveys, approximately every six years, of representative samples of households in the state. These surveys will gather information on what services are needed and how customers want them delivered.

In order to obtain information about the workforce training needs of employers, **WTECB, training agencies, and the Department of Community, Trade and Economic Development, in collaboration with business, labor, and other partners, will conduct surveys and focus groups of firms, including both geographic and industrial sector-based research.**

Establishing Benchmarks

Within one year, WTECB will utilize the National Governors' Association Performance Management Project to develop, in collaboration with other agencies and partners of the training system, measurable goals (or benchmarks) for workforce training and education. These goals will describe a preferred future and serve as a state "report card" on how well the workforce training and education system as a whole is doing in reaching our preferred future.

WTECB has already begun this process by beginning to develop "Targets for Excellence." When these Targets are fully developed, they will provide quantitative guideposts by which the state can measure its progress.

While the Targets will be measurable goals for the system as a whole, **the training system will also consider establishing measurable goals at the program level.** The training system must consider, for example, the establishment of ambitious expectations that can help guide program improvement.

Continuous Quality Improvement

WTECB, in collaboration with training agencies and partners, will work to promote continuous quality improvement, identifying the barriers that prevent people from using evaluative information, and creating incentives to use this information for program improvement. This will be a prerequisite for all the other accountability actions to really affect program performance.

WTECB and the other training agencies and partners will use the NGA Project to determine ways to link outcome and process evaluations to continuous quality improvement.

Public Engagement in the Process of Improvement

Raising the Level of Personal and Corporate Responsibility for Learning and Teaching

Citizens need to know how the global economy is changing, why higher levels of skill and knowledge are needed, and how both institutions and individuals must shoulder responsibility for creating a society where learning and teaching — at all levels and in all places — are valued, respected and rewarded.

The public must understand that the challenge of school reform is to help all students achieve higher levels of skill and knowledge than ever before. Everyone must also understand that the consequences of failing to do this will be economic decline and increasing poverty and social division.

Successful school reform efforts will also require a much deeper public understanding of the role of local communities in implementing the state's new school reform legislation. Site-based management, effective accountability measures and successful design and implementation of a school-to-work transition system will require a larger personal commitment from parents, businesses, volunteers and media leaders to strengthen the connections between schools, students and communities.

We must also increase the level of respect for skilled workers, the programs that serve them, and the jobs they do. In the past, we have defined academic success as the successful completion of a baccalaureate program. The most valued students in our high schools were those who were expected to go on to college; all others were relegated to lesser status.

A more realistic assessment of the value of all work, all workers, and all students will be an important driver of change and improvement in every part of our learning enterprise.

Successful public awareness measures will have to motivate people to take on greater personal responsibility for continuing their own learning and for teaching others.

Business leaders must also take on more responsibility by making every workplace a center of learning for both current and future workers.

To help the public understand and participate in the many changes in our learning and teaching systems, we need a coordinated communication strategy that links organizations such as the Commission on Student Learning, WTECB, the community and technical college system, the Office of the Superintendent of Public Instruction, business and labor communities, and other participants in the process of change. **Over the next three years, WTECB will lead a statewide effort to engage the public in a discussion of the need for higher levels of skill and knowledge and the importance of personal and corporate responsibility for lifelong learning.**

"The Board needs to make a strong case for workforce training to the public and policy makers now, so we can stop the erosion of financial support for the workforce training system... We have been eating our seed corn while other industrialized nations have been investing significantly more resources in developing their workforce capacity and their technology."

Steven L. VanAusdle, president of Walla Walla Community College, testifying May 24, 1994 in Spokane at WTECB hearings on the Comprehensive Plan.

"We must all modify our views of each other, and we all will gain. Industry, labor, education and government will only succeed if we enter this relationship as partners."

Harry Barnes, business manager, International Brotherhood of Electrical Workers Local 73, testifying May 24, 1994 in Spokane at WTECB hearings on the Comprehensive Plan.

Traveling the Road Together: Partnerships Among Business, Labor, Community Organizations, Education and Government

To get to our destination, we need stronger and deeper relationships among business, labor, education, community organizations and the many federal, state and local government agencies involved in economic development, job training and adult education.

Building Capacity for Productive Partnerships

In order for business and labor to be full partners with training and education providers, there must be greater capacity on the part of both business and labor to participate effectively in designing programs, ensuring that programs meet labor market needs and providing meaningful work-based learning opportunities.

WTECB, statewide associations of labor and business, and the workforce training and education agencies will collaborate in building the capacity of the private sector to participate in training and education policy and program development and implementation. WTECB will work with such organizations as the Washington State Labor Council, the Association of Washington Business, the Joint Council of Teamsters, and the Washington Roundtable, and will conduct surveys and focus groups, recruit private sector representatives, and provide staffing and training for these volunteers. Industry-based consortia will be very valuable in these efforts.

For their part, the workforce training and education agencies and institutions must welcome the authentic participation of private sector representatives in all stages of policy and program development and implementation.

Integrating Customer-Friendly Training and Education Services

Everyone involved in the workforce training and education system must work to integrate services so that customers can find the education, training, support services and job placement help they need when they need it.

Regardless of whether the Clinton Administration's proposed National Reemployment Act becomes law, Washington will explore a similar strategy and work to create one-stop centers or integrated service delivery systems to improve access to job-related services.

The Governor should continue to take leadership to establish "one-stop" or integrated service delivery systems for employment- and training-related services.

Workforce training and education agencies will increase public access to information about job-related services by expanding statewide technologies such as JOBNET, informational kiosks, toll-free numbers and electronic bulletin boards.

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By January 1, 1995, WTECB will, as required by House Bill 1988, "conduct a study in consultation with the Higher Education Coordinating Board on the feasibility of (a) redirecting all state and federal job training and retraining funds distributed by the state into a separate job training trust fund; and (b) distributing the funds according to uniform criteria."

Coordination Between Workforce Training and Economic Development

Workforce training must be linked to economic development strategies so that the supply of highly skilled workers is coordinated with the demand, and that Washington's training efforts help attract family-wage jobs.

The state's Department of Community, Trade and Economic Development, with the cooperation of WTECB and the workforce training and education agencies, should support the growth of key sectors of the economy, especially high value-added industries, by facilitating the creation of industry-based consortia. These consortia would tell the state what industry workforce training needs are, and combine forces to provide or receive employee training. Technical assistance brokers, employed by the consortia, would connect their members with the services available from the state and local program providers and from the private sector.

In order to provide incentives for such consortia, and to achieve economies of scale, workforce agencies should target training resources to such consortia in key industries.

Economic development strategies should also include expanding industrial extension services — currently an emphasis of the Clinton Administration. The services should include technical assistance, such as advice on industrial technology, human resource organization, market development, ISO 9000 certification and export opportunities.

The state's economic development efforts should also join forces with the workforce training and education system to promote high performance work organizations that fully engage the skills and decision-making capacity of Washington's workers. These practices raise productivity, enabling firms to pay higher wages.

Matching Labor Market Demand

The training system must work with industry partnerships of management and labor in order to obtain information on what skills are needed in the workplace and the expectations for future employment.

The Employment Security Department, WTECB, the State Occupational Information Coordinating Committee, and the workforce training and education agencies should work together to develop and disseminate accessible labor market information to program administrators, staff and participants. This information

"If this country is to have a great future, we're going to have to connect the generation that's growing now in the public schools to learning in a much more significant way. The first step is to define what learning is and what students are expected to learn and be able to do."

U.S. Education Secretary Richard W. Riley, as quoted in the *Congressional Quarterly Researcher*, March 11, 1994

should be easy to understand, and staff and participants in workforce training and education programs should be trained to use it.

The training system must also use labor market information in evaluating the results of training. **WTECB, the Employment Security Department, and the workforce training and education agencies should work together with business and labor on an ongoing basis to analyze the match between the supply of trained workers completing programs and the demand in the labor market.**

Coordinating at the Regional Level

State statutes direct WTECB to provide for sub-state regional coordination. Some states have recently established regional coordinating bodies similar to WTECB. In theory, these regional bodies are better informed about local needs and more able to guide resources to meet those needs. But initial reports from states with regional bodies indicate that the regional organizations create new challenges for coordination that may outweigh their value. Regional coordination should improve service, not simply create another organizational layer.

WTECB will convene a team of business and labor customers and state and local training and education agencies to examine the issue of regional coordination of the workforce training and education resources, reviewing the experience of other states and assessing options.

Milestones on the Journey of Lifelong Learning

Success at an Early Age: Transforming our Public Schools

Education for Citizenship, Personal Development and Economic Self-Sufficiency

Washington's historic new school reform legislation has set our public schools on a new course: the development of a results-oriented, locally controlled system of education that is guided by clear statewide goals, and held accountable for ensuring that all students master basic skills and knowledge.

To implement these changes — and to respond to growing numbers of students and tighter budgets — school districts across the state are exploring new strategies such as year-round schooling, flexible hours of instruction, site-based councils to govern individual schools, and collaborations with local businesses and citizens' groups.

Successful school reform will also save millions of dollars that are now spent on remedial instruction in our post-secondary education system.

While the aims of public education must include preparation for successful citizenship, the promotion of the life of the mind, and the creation of well-rounded human beings, greater attention is needed to the role our public schools play in preparing young people for economic self-sufficiency and a lifetime of continuous learning.

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Students at all educational levels need exposure to the world of work so they can make connections between what they learn in class and the use of that knowledge. This connection can increase engagement in learning — something that high standards alone won't do.

Workforce training and education agencies must actively support successful implementation of K-12 school reform.

And all government agencies must help ensure that public school students get the social and health services they need in order to learn.

Career Development: Getting an Earlier Start

Work-based learning programs in high school should not be students' first exposure to work; students should have an emphasis on career awareness in elementary grades and career exploration and counseling in middle and junior high schools.

Schools and students benefit when they rely on a variety of staff and volunteers from the private sector in order to provide students with knowledge about the career opportunities that await them and the skills and training and education that are necessary to achieve those opportunities. **Career development guidance must include private sector mentors and a growing number of workplace experiences as students progress through later years of school.**

Developing the New "Basic Skills"

To succeed in high performance work organizations, today's students must master the new basic skills — teamwork, critical thinking, making decisions, communication, adapting to change and understanding whole systems.

Student leadership organizations such as Distributive Education Clubs of America, Future Farmers of America, Vocational Industrial Clubs of America, Future Business Leaders of America, and Future Homemakers of America/Home Economics and Restaurant Organizations provide students with performance-based learning with private sector partnerships that help young people learn many of the new basic skills. **The state should continue to support training in student leadership.**

The School-to-Work Transition

Certificate of Mastery

As part of the state's overall reform of public education, students are expected to demonstrate proficiency in core academic elements at or about age 16. The Certificate of Mastery they earn will verify to employers, among others, that these students have the necessary educational foundation to be conscientious citizens and capable workers. For this to be true, **business and labor representatives must help create the new learning standards and new opportunities for students to integrate academic and vocational class work with exposure to a variety of occupations and workers.**

"The number one difficulty our students are having is that they have lost the desire to learn. What they need is to get their dream back. In the past year I've seen more students get their dream back than I ever did in any of the other places I've been. They came into our program and found out that they weren't stupid, that maybe they just learned to express themselves differently. But whatever happened, they got turned on. That needs to happen in every facet of education."

Don Howell, assistant director of the Tri-Tech Area Vocational Skills Center in Kennewick, testifying May 18, 1994 in Yakima at WTECB hearings on the Comprehensive Plan.

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"For the first time ever, I actually like going to school...I hope this legislation helps students across the country understand that school and work are connected, so that they don't have to learn the hard way like myself."

Former dropout Chris Brady, a 20-year-old senior at Boston High School, at the signing of the School-to-Work Opportunities Act of 1994.[4]

Post-Certificate of Mastery

Under school-to-work reforms, students who have attained the Certificate of Mastery will also have received career guidance, have been exposed to career opportunities, and will be making choices that shape their last two years of high school. **After the Certificate of Mastery, students will be increasingly engaged in work-based learning supported by applied academics, with learning organized around career pathways. For these experiences to be meaningful, business and labor must help design the learning standards and assessments.** They must help identify the proficiencies needed for a variety of occupations and offer students the opportunity to integrate work-based and school-based learning.

Additionally, the work students do in school and at the job site must receive acknowledgment from post-secondary and higher education through articulation agreements that grant credit for both school-based and work-based learning at all educational levels.

Work-Based Learning

All high school students should participate in structured work-based learning. Their education should include employment that develops broad, transferable workplace competencies that can lead to entry-level employment, training toward industry-defined skill standards, or connection to further academic and professional education. Work-based learning should utilize specific training plans and agreements, clarifying the roles of students, teachers and employers, and must include safety and health training for all students.

At all education levels, work-based learning can only be successful when business, labor, educators and training providers are involved in the design and implementation of these programs.

Skill Standards

Industry-defined skill standards spell out what job applicants must know and be able to do to succeed in a specific occupation or cluster of occupations. The development of skill standards for various jobs helps training and education providers ensure that students get the skills they need for the jobs they want.

Washington has had some notable successes in the creation of industry-defined skill standards, but there is currently no process for promoting or instituting such skill standards or statewide certification. While the private sector must take the lead in identifying standardized competencies, in order to speed the process and ensure portability and certification, the public sector must be a catalyst, organizing and facilitating the process and encouraging training providers to move toward competency-based instruction that will help students achieve the skill standards for their chosen occupation. **The State Board for Community and Technical Colleges, working with WTECB, the Department of Community, Trade and Economic Development, and the Office of the**

Superintendent of Public Instruction, will provide leadership for skill standards development and use.

Lifelong Opportunity: Training and Education for Adults

Capacity for All Learners

There must be adequate capacity and funding to provide workforce training and education to all those who need it. New programs such as Running Start and TECH PREP, layoffs in the timber and aerospace industries, the emphasis on helping those on welfare move to employment, corporate downsizing and a renewed commitment to lifelong learning are all bringing new participants into the system.

Creating the capacity to serve increasing numbers of learners will require both greater creativity in using current resources and new sources of investment.

To get the most from our investments in education reform in public schools, the post-secondary system must also continue its progress toward making its programs competency-based, so that time and resources are not wasted when students are required to take classes in subjects they have already mastered.

Even with these savings, however, unmet needs will remain. More state funding will be required, and more resources must be gathered from private as well as public sources. For example, **the Governor and Legislature should consider offering tax incentives to employers who provide training and education to their employees.** This would increase training capacity in the state without spending additional state dollars. **The system must also take actions such as increased use of volunteer instructors from the private sector, and investing in long-distance learning technologies.**

We must have sufficient space in modern, well-equipped facilities. But building new facilities is not the only way to fill this need. **Investments can be stretched by increasing our use of workplaces for training and education, by making high schools and skills centers available to adults, and by making college facilities available to youth when not in use by their regular students.** Cooperative agreements between public and private providers can ensure student access to the widest range of training opportunities.

Support Services

Support services such as financial assistance, career and other counseling, child care and job placement, must be easily accessible to all learners.

For dislocated or injured workers, support services and training need to be immediately accessible, so that they are available at the beginning rather than the end of unemployment or workers' compensation benefits.

"If a person who lives in Cusick wants to learn how to run a computer so she can re-enter the labor market, why should she drive 60 miles to a college in Spokane when Cusick High School is teaching the same thing? We need to break down barriers between programs and age groups, and serve the people of our state."

Dan Birdsell, retired educator and a consultant to rural vocational education programs in Eastern Washington, testifying May 24, 1994 in Spokane at WTECB hearings on the Comprehensive Plan.

Making up for Lost Time: Improving Basic Skills and Literacy Among Adult Workers

"The traditional labor-intensive public works jobs that we saw in the past are no longer simple. Our trash collectors and utilities people have to have blood-borne pathogen training! Hiring a person that is qualified for the job without training now is unlikely. We have to provide additional training for almost anybody we hire."

Jerry Copeland, public works director, City of Yakima, testifying May 18, 1994 in Yakima at WTECB hearings on the Comprehensive Plan

Thirty-two percent of employers responding to a survey conducted for the 1990 Investment in Human Capital study reported being dissatisfied with the basic skills (reading, writing and math) of their employees. And 570,000 adult workers in Washington are estimated to function in the lowest two categories of skill and knowledge measured by the State Adult Literacy Survey.

Unless they learn more, those 570,000 working adults may not be able to meet the higher skill standards necessary to keep their jobs, or to qualify for promotion or to succeed at retraining.

Their employers are also at risk of losing their ability to compete and to raise productivity levels.

Improve Basic Skills in the Workplace

On-the-job training that integrates literacy and basic skills with specific, job-related requirements is one of the most promising ways to engage workers in learning. At the same time, offering instruction at the worksite offers opportunities for employers to tailor instruction to the needs of specific industries and a chance to instill the new basic skills — like teamwork and problem-solving — that make high performance workplaces more competitive.

Employers and unions need help, however, to mount such programs. Small and medium-sized businesses and unions do not have the resources to develop curriculum or the expertise to design programs.

There must be a clearinghouse of information with strong private sector guidance that provides technical assistance to firms concerning workplace literacy.

Assist Adults with Limited Skills Who Are Unemployed or Underemployed

There will be a continuing need for programs for adult learners who are new immigrants, welfare recipients, workers facing technological changes or employer expectations for higher skills, or underemployed part-time workers. For these programs to succeed, a new era of customer-driven program design must begin immediately.

Instead of focusing on students' deficiencies, programs must build on their strengths; respond to their individual interests, goals, and cultures; and restore learners' sense of both the dignity and the adventure of learning.

The state must support family literacy programs that are directed at breaking the cycle of multi-generational poverty and illiteracy so that parents can help their children succeed in school.

The Adult Education Advisory Council and the State Board for Community and Technical Colleges should develop guidelines and policies designed to increase the

success rate and quality of basic skills education programs, including integrating basic skills instruction with vocational training.

Coordination and Consistency

Basic skills programs must become an integral part of an education system that is geared toward lifelong learning. **There must be consistency, for instance, between the Essential Academic Learning Requirements being developed for public schools by the Commission on Student Learning and the Core Competencies for Adult Basic Education developed for adults.**

Measuring Changes in Basic Skills

In order to assess our progress, there should be a collaborative effort of the Adult Education Advisory Council, the State Board for Community and Technical Colleges, Employment Security, WTECB, and others to periodically measure the functional literacy of Washington adults.

Teaching What We Know: The Classroom, the Board Room and the Front Lines of Manufacturing and Service Delivery

Developing a Culture of Learning and Teaching

In the past, the words "education" and "learning" immediately conjured up a picture of a classroom, usually filled with children or young people, and with a specially-trained teacher or professor facing neat rows of desks and delivering a lecture.

In the future, the words "education" and "learning" will conjure up a much wider variety of images:

- Adult workers learning from each other and from their supervisors on the job,
- Classrooms filled with people of all ages working at computers,
- Video teleconferences that bring together teachers and learners from across the state, and
- Students of all ages at home accessing information and gaining skills from the information superhighway.

In many areas, the distinction between learners and teachers will fade, as more of us teach the skills we have mastered, while at the same time learning new skills from others.

But the heart of the workforce training and education system will always be a corps of highly qualified instructors who stay current in their field and who care deeply about the success of all their students.

Professional Development

Recruiting and retaining such instructors will require the creation of systems that reward excellence — that is, systems that are based on performance outcomes and competencies. **Current and future instructors should have both educational training and industry experience, so that they can integrate academic and vocational learning goals.**

Educational preparation and in-service training must provide teachers with the skills and the curriculum needed to integrate vocational and academic learning.

Achievement of this target will include the use of telecommunications for teacher training, mentoring and modeling activities, and the creation of new partnerships among all sectors of the education community, business and labor.

It will also require changes in the way teachers are trained initially in the certification requirements for faculty and in professional development activities. **As we move toward a competency-based education system for students, the organizations responsible for professional development must create a system of teacher preparation and professional development that is competency-based, integrates vocational and academic education, and enables teachers to help students succeed in reaching higher standards.**

Sharing Best Practices for Effective Learning

To promote continuous improvement, the state must provide local programs with information on what works and what doesn't. There is a wealth of research data on how people learn, how successful programs work and what pitfalls to avoid. Telecommunication networks, regional seminars and/or a central resource center are among the ideas for dissemination of this vital information. The Center for the Improvement of Student Learning in the Office of the Superintendent of Public Instruction is serving this function for our K-12 schools.

Conclusion

As we embark on the arduous task of bringing the recommendations of this plan to life, we are mindful of the high stakes involved in meeting the challenge of change. We know how much a family-wage job means to every adult worker. We understand the importance of well-educated employees to Washington business owners. And perhaps most compelling, we understand that failure to achieve the goals of this plan will cripple the economic prospects of the people of our state.

Knowing what we face, we are confident that Washington has the leadership, energy and perseverance to make it to our destination: a world class workforce.

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National Governors' Association
Northwest Policy Center
Office of Financial Management
Office of the Governor
Office of the Superintendent of Public Instruction
State Board for Community and Technical Colleges
State Board of Education
State Job Training Coordinating Council
Washington Federation of Private Vocational Schools
Washington State Apprenticeship and Training Council
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